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CATALOGUE

1922-1923

Containing general information concerning the Univ
Announcements for the Scholastic Year 1922-
and Records of 1921-1922

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UNIVERSITY CALENDAR 1922-1923

Unless otherwise indicated, this calendar refers to the activities at College Park.

FIRST TERM

1922

September 25-26	Monday-Tuesday	Entrance and condition examinations. Registration for all students.
September 25	Monday	The School of Commerce (Extension Courses) The School of Law, Regular session begins.
September 27	Wednesday, 8:20 A. M.	Instruction for first term begins. No admission to classes without class cards.
September 27	Wednesday, 11:20 A. M.	Assembly of student body for President's annual address.
September 29	Friday, 8:00 P. M.	President's reception for new students.
October 2	Monday	Last day to register or change registration without payment of additional fee. Last day to file schedule in Registrar's Office without payment of fine.
October 2	Monday	The School of Medicine The School of Pharmacy The School of Dentistry Regular session begins.
November 10	Second Friday in November, 8:00 P. M.	Freshman entertainment.
November 29	Wednesday, 12 M.	Thanksgiving recess begins.
November 30	Thursday	The School of Commerce (Extension Courses) The School of Medicine The School of Law The School of Pharmacy The School of Dentistry Thanksgiving Day. Holiday.
December 5	Tuesday, 8:20 A. M.	Classes begin after Thanksgiving recess.

December 8	Second Friday after Thanksgiving, 8:00 P. M.	Christmas dance.
December 15	Friday, 8:00 P. M.	Presentation by "The Players."
December 11-21		Registration for Second Term.
December 20	Wednesday	The School of Commerce (Extension Courses) The School of Medicine The School of Law The School of Pharmacy The School of Dentistry Christmas vacation begins after last lecture period.
December 21	Thursday, 12 M.	First Term Ends. Christmas recess begins.

SECOND TERM

1923

January 2	Tuesday	Payment of fees and securing class cards. Offices open from 8:00 A. M. to 5:00 P. M.
January 3	Wednesday, 8:20 A. M.	Instruction for second term begins. No admission to classes without class cards.
January 3	Wednesday	The School of Medicine The School of Law The School of Pharmacy The School of Dentistry Christmas recess ends. Lectures begin at 9:00 A. M.
January 9	Tuesday	Last day to register or change registration without payment of additional fee. Last day to file schedule card in Registrar's Office without payment of fine.
February 12	First Friday in February	Intersociety debate.
February 22	Thursday	Washington's Birthday. General holiday in all colleges and schools, College Park and Baltimore.
March 1	Thursday, 8:00 P. M.	Intercollegiate debate.
March 19-27		Registration for third term.
March 26		Maryland Day exercises.
March 28,	Wednesday, 4:20 P. M.	Second term ends. Easter Recess begins.
March 29	Thursday	The School of Medicine The School of Law The School of Commerce (Extension Courses) The School of Dentistry The School of Pharmacy Easter recess begins after last lecture period.
April 3	Tuesday, 9:00 A. M.	The School of Medicine The School of Law The School of Commerce (Extension Courses) The School of Dentistry The School of Pharmacy Classes begin after Easter recess.

THIRD TERM

April 3	Tuesday	Payment of fees and securing of class cards. Offices open from 8:00 A. M. to 5:00 P. M.
April 4	Wednesday, 8:20	Instruction for third term begins. No admission to classes without class cards.
April 10	Tuesday	Last day to register or change registration without payment of additional fee. Last day to file schedule card in Registrar's Office without payment of fine.
May 18	Third Friday in May, 8:30 P. M.	May Ball.
May 30	Wednesday	Decoration Day. Holiday.
June 1	Friday	The School of Commerce (Extension Courses) The School of Medicine The School of Law The School of Pharmacy The School of Dentistry Commencement Day.
June 1	Friday, 8:00 P. M.	Presentation by "The Players."
June 8	Friday, 4:10 P. M.	Classes close for seniors.
June 10	Sunday, 11:00 A. M.	Baccalaureate Sermon.
June 14	Thursday, 8:00 P. M.	Class night exercises.
June 15	Friday, 4:10 P. M.	Third Term ends.
June 15	Friday	Reunion Day.
June 16	Saturday, 11:00 A. M.	Commencement Day.

BOARD OF REGENTS

(Members appointed by the Governor for terms of nine years)

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Mt. Victoria, Charles County.

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6 West Madison Street, Baltimore.

JOHN E. RAINE.....1921-1930
413 East Baltimore Street, Baltimore.

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Princess Anne, Somerset County.

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B. JOHN BLACK.....1918-1927
Roslyn, Baltimore County.

HENRY HOLZAPFEL.....1917-1926
Hagerstown, Washington County.

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ROBERT CRAIN
DR. W. W. SKINNER

EXPERIMENT STATION AND INVESTIGATIONAL WORK
B. JOHN BLACK, Chairman
DR. W. W. SKINNER
HENRY HOLZAPFEL

EXTENSION AND DEMONSTRATION WORK
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B. JOHN BLACK
JOHN E. RAINE

INSPECTION AND CONTROL WORK
JOHN M. DENNIS, Chairman
HENRY HOLZAPFEL
CHARLES C. GELDER

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J. E. PALMER, Executive Secretary.

MAUDE F. McKENNEY, Financial Secretary.

G. S. SMARDON, Comptroller.

W. M. HILLGEIST, Registrar.

H. L. CRISP, M.M.E., Superintendent of Buildings.

T. A. HUTTON, Purchasing Agent and Manager of Students' Supply Store.

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HENRY D. HARLAN, LL.D., Dean of the School of Law.
E. FRANK KELLY, Phar.D., Dean of the School of Pharmacy.
T. O. HEATWOLE, M.D., D.D.S., Dean of the School of Dentistry.
H. F. COTTERMAN, M.S., Dean of the College of Education.
M. MARIE MOUNT, A.B., Acting Dean of the College of Home Economics.
C. O. APPLEMAN, Ph.D., Dean of the Graduate School.
H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station.
T. B. SYMONS, M.S., D.Agr., Director of the Extension Service.
R. H. LEAVITT, Major, U. S. A., Head of the Department of Military Science and Tactics.

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E. S. JOHNSTON, Ph.D., Secretary.
H. J. PATTERSON, D.Sc., Director of the Agricultural Experiment Station.
T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics.
E. N. CORY, M.S., Professor of Entomology.
H. C. HOUSE, Ph.D., Professor of English Language and Literature.
A. G. MCCALL, Ph.D., Professor of Geology and Soils.
DEVOE MEADE, Ph.D., Professor of Animal Husbandry.
N. E. GORDON, Ph.D., Professor of Physical Chemistry.

OFFICERS OF INSTRUCTION

ALBERT F. WOODS, M.A., D.Agr., President.
(The order of the following is that of seniority of appointment)
H. B. MCDONNELL, M.S., M.D., Professor of Chemistry.
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W. T. L. TALIAFERRO, A.B., Sc.D., Professor of Farm Management.
J. B. S. NORTON, M.S., Professor of Systematic Botany and Mycology.
C. S. RICHARDSON, A. M., Professor of Public Speaking and Extension Education.
HARRY GWINNER, M.E., Professor of Mechanical Engineering, Vice-Dean, College of Engineering.
T. H. TALIAFERRO, C.E., Ph.D., Professor of Mathematics.
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E. N. CORY, M.S., Professor of Entomology, State Entomologist.
C. O. APPLEMAN, Ph.D., Professor of Plant Physiology and Bio-chemistry, Dean of Graduate School.
ROY H. WAITE, M.S., Professor of Poultry Husbandry.
L. B. BROUGHTON, M.S., Professor of Industrial Chemistry and chairman of Premedical Committee.
H. C. BYRD, B.S., Assistant to the President and Director of Athletics.
C. E. TEMPLE, M.S., Professor of Plant Pathology.
J. E. METZGER, B.S., Professor of Agronomy.
O. C. BRUCE, B. S., Professor of Soils.
C. J. PIERSON, A.M., Professor of Zoology.
P. W. ZIMMERMAN, M.S., Professor of Plant Physiology and Ecology, Dean of College of Agriculture.
A. G. MCCALL, Ph.D., Professor of Geology and Soils.
R. C. REED, Ph.B., D.V.M., Professor of Animal Pathology, Chairman of Animal Industry Group.
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E. M. PICKENS, D.V.M., A.M., Professor of Bacteriology and Animal Pathologist of the Biological and Live Stock Sanitary Laboratory.
DEVOE MEADE, Ph.D., Professor of Animal Husbandry.
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M. MARIE MOUNT, A.B., Professor of Home and Institutional Management, Acting Dean of College of Home Economics.
EDNA B. MCNAUGHTON, B.S., Professor of Home Economics Education.
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R. C. WILEY, M.S., Associate Professor of Chemistry.
L. J. HODGINS, B.S., Assistant Professor of Electrical Engineering.
J. T. SPANN, B.S., Assistant Professor of Mathematics.
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S. H. HARVEY, B.S., Assistant Professor of Dairy Husbandry.
W. A. GRIFFITH, M.D., Instructor in Hygiene, College Physician.
M. A. PYLE, B.S., Instructor of Civil Engineering.
M. ROWE (Miss), Instructor in Library Science, Librarian.
M. D. BOWERS, A.B., Instructor in Journalism.
L. J. POELMA, D.V.S., Instructor in Dairy Bacteriology.
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A. R. DYMOND (Miss) A.B., Instructor in Public Speaking.
D. C. HENNICK, Assistant in Mechanical Engineering.
F. D. DAY, B.S., Assistant in Agricultural Education.
L. H. VAN WORMER, M.S., Assistant Chemist.
H. R. WALLS, Assistant Chemist and Inspector.
E. B. DONALDSON, M.S., Assistant Chemist and Inspector.
A. L. FLENNER, B.S., Assistant Chemist.
B. L. GOODYEAR, B.S., B.Mus., Teacher of Voice and Piano
JESSIE BLAISDELL (Mrs.), Assistant in Music.
J. S. DOUGHERTY, Captain, Infantry, D.O.L., Assistant in Military Science and Tactics.
J. W. STANLEY, Captain, Infantry, D.O.L., Assistant in Military Science and Tactics.
H. LINDEN, Captain, Infantry, D.O.L., (B.S. in Engineering), Assistant in Military Science and Tactics.
W. H. MCMANUS, Warrant Officer, U. S. A., Assistant in Military Science and Tactics.
W. H. SIMMONS, Sergeant, D.E.M.L., Assistant in Military Science and Tactics.
EDW. FERGUSON, Sergeant, D.E.M.L., Assistant in Military Science and Tactics.

SPECIAL INSTRUCTORS IN REHABILITATION DEPARTMENT

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ALBERT F. VIERHELLER, B.S.A., Instructor in Horticulture.
F. H. LEUSCHNER, B.S., Instructor in Poultry.
GEORGE HARRISON, JR., Instructor in Apiculture.
EDNA B. NEW, Instructor in Vocational English.
FLORENCE KITE, Instructor in Farm Arithmetic.

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THOS. H. WHITE, M.S.....Vegetable and Floriculture.
CHAS. O. APPLEMAN, Ph.D.....Plant Physiology.
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E. N. CORY, M.S.....Entomology.
A. G. MCCALL, Ph.D.....Soils.
J. E. METZGER, B.S.....Agronomy.

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E. S. JOHNSTON, Ph.D.....Associate, Plant Physiology.
O. C. BRUCE, B.S.....Associate, Soil Survey.
A. M. SMITH, M.S.....Associate, Soils.
R. L. SELLMAN, B.S.....Assistant, Agronomy.
H. B. WINANT, B.S.....Assistant, Soils.
W. N. EZEKIEL, B.S.....Assistant, Plant Pathology.
C. C. HAMILTON, M.S.....Assistant, Entomogy.
ANNA M. HOOK.....Assistant, Seed Inspection.
ISABELLA VEITCH.....Assistant, Seed Inspection.
CAROLINE VEITCH..... Assistant, Seed Inspection.
MARION B. JOHNSON.....Assistant, Seed Inspection.
A. L. SHRADER, M.S.....Assistant, Pomology.
C. M. CONRAD, B.S.....Assistant, Plant Physiology.
C. P. WILHELM, B.S.....Assistant, Soils.
WILLLIAM MATHER, M.S.....Assistant, Soils.
HOWARD ALEXANDER, B.S.....Assistant, Soils.

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*THOMAS B. SYMONS, M.S.D., Agr.....Director.
*F. B. BOMBERGER, B.S., A.M., D.Sc.....Assistant Director and Specialist in Rural Organization and Marketing.
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*P. W. CHICHESTER, B.S.....Assistant Boys' Club Agent.
*MISS VENIA M. KELLAR, B.S.....State Home Demonstration Agent.
*MRS. MARION C. BELL.....District Agent and Specialist.
*MISS BERTHA KNIGHT, B.S.....District Agent and Specialist.
*MISS ADICE S. JONES.....Assistant State Girls' Club Agent.
†E. C. AUCHTER, M.S.....Specialist in Horticulture.
W. R. BALLARD, B.S.....Specialist in Vegetable and Landscape Gardening.
M. D. BOWERS, B.A.....Specialist in Agricultural Journalism.
B. E. CARMICHAEL, B.S.....Specialist in Animal Husbandry.
†R. W. CARPENTER, A.B.....Specialist in Farm Engineering.
J. A. CONOVER, B.Sc.....Specialist in Dairying.
†E. N. CORY, M.S.....Specialist in Entomology.
†J. A. GAMBLE, M.S.....Specialist in Dairying.
R. A. JEHLE, B.S.A., Ph.D.....Specialist in Pathology.
F. W. OLDENBURG, B.S.....Specialist in Agronomy.
†C. S. RICHARDSON, A.B.....Specialist in Educational Extension.
S. B. SHAW, B.S.....Specialist in Horticulture.
†C. E. TEMPLE, M.S.....Specialist in Pathology.

* In cooperation with the U. S. Department of Agriculture.
† Devoting part time to Extension Work.

COUNTY AGENTS

County	*Name*	*Headquarters*
Allegany	*R. F. MCHENRY, B.S.	Cumberland
Anne Arundel	*G. W. NORRIS, B.S.	Annapolis
Baltimore	*E. E. MCLEAN, B.S.	Towson
Calvert	*J. H. DRURY	Chaney
Caroline	*W. C. THOMAS, B.S.	Denton
Carroll	*F. W. FULLER, B.S.	Westminster
Cecil	*A. D. RADEBAUGH	Elkton
Charles	*J. P. BURDETTE, A.B.	La Plata
Dorchester	*P. W. MOORE, B.S.	Cambridge
Frederick	*P. A. HAUVER, B.S.	Frederick
Garrett	*J. A. TOWLER, B.S.	Oakland
Harford	*B. B. DERRICK, B.S.	Bel Air
Howard	*R. L. POST, B.S., M.S.	Ellicott City
Kent	*H. B. DERRICK, B.S.	Chestertown
Montgomery	*W. C. SNARR, B.S.	Rockville
Prince Georges	*W. B. POSEY, B. S.	Upper Marlboro
Queen Anne's	*O. C. JONES, B.S.	Centerville
St. Mary's	*G. F. WATHEN	Loveville
Somerset	*C. Z. KELLER, B.S.	Princess Anne
Talbot	*E. P. WALLS, B.S., M.S.	Easton
Wicomico	*G. R. COBB, B.S.	Salisbury
Washington	*S. E. DAY, B.S.	Hagerstown
Worcester	*E. I. OSWALD, B.S.	Snow Hill
	ASSISTANT COUNTY AGENT	
Harford	*G. R. STUNTZ, B.S.	Bel Air
	LOCAL AGENTS	
Southern Maryland	*J. F. ARMSTRONG (*col.*)	Seat Pleasant
Eastern Shore	*L. H. MARTIN (*col.*)	Princess Anne

* In cooperation with the U. S. Department of Agriculture.

HOME DEMONSTRATION AGENTS

County	*Name*	*Headquarters*
Allegany	*M. Rhea Morgan	Cumberland
Anne Arundel	*Mrs. G. Linthicum	Annapolis
Baltimore		
Calvert		
Caroline	*Emily Kellog, B.S.	Denton
Carroll	*Rachel Everett	Westminster
Cecil	*Elizabeth Hodgson	Elkton
Charles	*E. S. Bohannan (Mrs.)	La Plata
Dorchester	*Eliz. Van Scoter, B.S.	Cambridge
Frederick	*Frances Gerber, B.S.	Frederick
Garrett	*Laura I. Henshaw	Oakland
Harford	*Blanche Gittinger, B.S.	Bel Air
Howard		
Kent	*Susan V. Hill	Chestertown
Montgomery	*Catharine Cowsill	Rockville
Prince Georges	*Ellen L. Davis	Hyattsville
Queen Anne's	*Mary L. Byrn	Centerville
St. Mary's	*Ethel Joy	Leonardtown
Somerset	*M. Louise Mills	Princess Anne
Talbot	*Olive K. Walls	Easton
Wicomico	*Clara Mullen	Salisbury
Worcester	*Lucy J. Walter	Snow Hill
Washington	*S. S. Garberson	Hagerstown

LOCAL AGENTS

Charles & St. Mary's	*Leah D. Woodson (*col.*)	La Plata

GARDEN SPECIALIST

Madison & Lafayette Aves., Administration Bldg.	Adelaide Derringer (Mrs.)	Baltimore

*In cooperation with the U. S. Department of Agriculture.

FACULTY COMMITTEES FOR 1922-1923

ALUMNI

Messrs. Broughton, Hoshall, Stinson, Hillegeist and Cory.

BUILDINGS

Messrs. Crisp, Johnson, Creese, Pierson and Carpenter.

CATALOGUE, STUDENT ENROLLMENT AND ENTRANCE

Messrs. Zimmerman, T. H. Taliaferro, Spence, Cotterman, Creese, Broughton, Hillegeist, Appleman, and Miss Mount.

UNIVERSITY PUBLICATIONS

Messrs. Patterson, Bowers, McDonnell, Richardson and Symons.

COURSES OF STUDY

Messrs. Cotterman, Reed, Spence, Zimmerman, Gordon, Hillegeist, Leavitt, Appleman, T. H. Taliaferro, Johnson, Misses Mount, and Wiegand.

GROUNDS AND ROADS

Messrs. Auchter, Thurston, Crisp, Patterson, Steinberg, Metzger and Carpenter.

COMMENCEMENT

Messrs. T. H. Taliaferro, Richardson, Cory, Spence, House and Leavitt.

SANITATION

Messrs. Pickens, Griffith, McDonnell, W. T. L. Taliaferro, Cory, Pyle and Miss Mount.

STUDENT AFFAIRS

Messrs. Byrd, Broughton, Cory, Schulz, Bomberger and class presidents.

STUDENT PUBLICATIONS

Messrs. Steinberg, House, Bowers, Gamble and Lemon.

FARMERS' DAY.

Messrs. Patterson, Symons and Zimmerman and Miss Mount.

EDUCATIONAL STANDARDS

Messrs. Appleman, McCall, Gordon, Johnson, Cory and Hillegeist.

PRE-MEDICAL EDUCATION

Messrs. Broughton, Cory, Davis, Spence, Wiley and McGlone.

GENERAL INFORMATION

The University of Maryland

Location

The University of Maryland is located at College Park in Prince George's County, Maryland, on the line of the Washington branch of the Baltimore and Ohio Railroad, eight miles from Washington and thirty-two miles from Baltimore. At least eight trains a day from each city stop at College station, thus making the place easily accessible from all parts of the State. Telephone connection is made with the Chesapeake and Potomac lines.

The grounds front on the Baltimore and Washington Boulevard. The suburban town of Hyattsville is two miles to the south, and Laurel, the largest town in the county, is ten miles to the north on the same road. Access to these towns and to Washington may be had by steam and electric railway. The site of the University is particularly beautiful. The buildings occupy the crest of a commanding hill, which is covered with forest trees and overlooks the entire surrounding country. In front, extending to the boulevard, is a broad rolling campus, the drill ground and athletic field. A quarter of a mile to the northeast are the buildings of the Agricultural Experiment Station. The farm of the College of Agriculture contains about 300 acres, and is devoted to fields, gardens, orchards, vineyard, poultry yards, etc., used for experimental purposes and demonstration work in agriculture and horticulture.

The general appearance of the grounds is exceedingly attractive. They are tastefully laid off in lawns and terraces ornamented with shrubbery and flower beds.

The location of the University is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been practically no serious case of illness among the students for many years.

The Schools of Medicine, Pharmacy, Dentistry, and Law of the University are located in Baltimore at the corner of Lombard and Greene Streets.

History

The history of the present University of Maryland practically combines the histories of two institutions. It begins with the chartering of the College of Medicine of Maryland in Baltimore in 1807, which graduated its first class in 1810. In 1812 the institution was empowered to annex other departments and was by the same act "constituted an University by the name and under the title of the University of Maryland." As such, its Law and Medical schools have since been especially prominent in the South and widely known throughout the country. The Medical School

building in Baltimore, located at Lombard and Greene Streets, erected in 1814-1815, is the oldest structure in America devoted to medical teaching.

For more than a century the University of Maryland stood almost as organized in 1812, until an act of the Legislature in 1920 merged it with the Maryland State College, and changed the name of the Maryland State College to the University of Maryland. All the property formerly held by the old University of Maryland was turned over to the Board of Trustees of the Maryland State College, and the Board of Trustees changed to be the Board of Regents.

The Maryland State College first was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States, recognizing the practical value and increasing need of such colleges, passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed Western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Asembly of Maryland. The Maryland Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 its control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College and made it the Maryland State College.

The University is coeducational and under the charter every power is granted necessary to carry on an institution of higher learning and research, comparable to the great state universities of the West, in which Agriculture and Engineering hold a dominant place along with the Liberal Arts and professions. This is in full accord with the Morrill Act of the National Congress and the subsequent acts above referred to. This institution, therefore, is the representative of the State and the Nation in higher education and research. The charter provides that it shall receive and administer all exising grants from the national government and all future grants which may come to the State for this purpose.

BUILDINGS

Some eighteen buildings have been erected on the University campus for research, extension, and residence educational purposes. The buildings comprised in the group are the Agricultural Building, Calvert Hall, Silvester Hall, the Library, Engineering Buildings, Chemical Building, Morrill Hall, Horticultural Building, the Hospital, Stock Judging Pavilion, Poultry Building, temporary dining-hall, temporary auditorium, Girls' Home Economics Practice House, and the Agricultural Experiment Station group. Other buildings are located in Baltimore.

Agricultural Building

The Executive Offices, the College of Agriculture, College of Education, College of Home Economics, and the Agricultural and Home Economics Extension Service are housed in the Agricultural Building. This structure was completed and occupied in April, 1918. The building also contains biological, soils and bacteriological laboratories.

Buildings in Baltimore

The buildings of the University in Baltimore are located at the corner of Lombard and Greene streets. They consist of the original building erected in 1814, and more modern buildings adjoining, one of which is devoted to Law and one the Universiy Hospital.

Calvert Hall

Excellent dormitory accommodations for men are provided in Calvert Hall, a modern fireproof structure erected and occupied in 1914. It took in part the place of the two dormitories destroyed by fire in 1912.

New Dormitories

Two new buildings recently were completed. One is used as a men's dormitory and has been dedicated as Silvester Hall, in honor of Dr. R. W. Silvester, who served as president of the institution for 20 years, and the other for women. The men's dormitory is a large four-story building while the women's is a model home and a unit of the Home Economics group.

Morrill Hall

The College of Arts and Sciences is partially housed in Morrill Hall, which is a three-story building erected in 1898. This building formerly was occupied by the work in agriculture and engineering.

Chemical Building

The Chemical Building provides a place for instruction in Chemistry and for the state work in analysis of feeds, fertilizers and agricultural lime. It has classrooms, laboratories, and offices for all undergraduate work in chemistry. This work is under the jurisdiction of the College of Arts and Sciences.

Engineering Buildings

The Mechanical Building was the first of the Engineering group constructed, having been completed and occupied by the Department of Mechanical Engineering in 1898. The Civil Engineering and Electrical Engineering additions, with accompanying shops, were built in 1910. The three buildings are connected by closed passageways.

The Infirmary

The infirmary was erected in 1901 and makes possible excellent treatment for students in cases of sickness. It has a private ward for segregation of contagious diseases, quarters for trained nurse, operating room, doctor's office, special culinary equipment, and accommodations for twenty patients.

The Horticultural Building

Classrooms, propagation rooms, and offices are in the Horticultural Building, completed in 1915. Ten modern greenhouses are constructed as a part of this building.

The Stock Judging Pavilion

This building is used for stock judging competitions, for stock shows, and to house a part of the equipment of the dairy husbandry and farm machinery departments of the College of Agriculture. Connecting this building with the Agricultural Building is an auditorium to seat 600 persons.

The Poultry Buildings

Research in poultry projects and laboratory practice is carried on in the Poultry Building. The main building contains classrooms, laboratories, offices and incubating rooms.

Experiment Station Group

The main building of the experiment station group is a large brick structure of the colonial period. It contains the office of the Director of the Station, the chemical and physiological laboratories, and a laboratory for research in soils. Other buildings of this group contain seed and milk testing laboratories and classrooms. There are also greenhouses, an Agronomy Building, a secondary horticultural building, barns, farm machinery buildings, silos, etc.

Temporary Dining-Hall

A temporary wooden structure has been erected to serve as a dining-hall until the Legislature appropriates money to put up a permanent building. This wooden structure is well built and contains kitchen equipment and other facilities for comfortably taking care of about 500 persons.

Other Buildings

Another wooden structure used for several years as an auditorium is serving as a dormitory. The University also maintains a laundry building in which it handles the students' laundry at cost. It also has two frame dwelling-houses in which it houses part of its labor. A brick power-house contains apparatus for pumping all water for University use. Another small frame house contains machinery for canning and drying fruits and vegetables.

The Filtration Plant

Recently completed is a modern filtration plant for furnishing an ample supply of water for use in the dormitories and general university buildings. This plant consists of a reservoir with a reserve supply of 1,500,000 gallons, sediment tanks, filter beds, pumps, etc.

Gerneaux Hall

This building serves as a dormitory and practice house for the girls taking courses in Home Economics. It is fitted with all the appliances of the modern home.

Library Building

The Library is housed in a separate two-story building on the first floor of which is collected material relating to agriculture. The special catalogue cards issued by the United States Department of Agriculture make accessible the large amount of state and national bulletin literature on agricultural and related scientific subjects. The second floor is used for general reading and reference work.

Through the Inter-Library Loan systems of the Library of Congress and the United States Department of Agriculture the University Library is able to supplement its reference material by either personal work in these Washington libraries or by actually borrowing the books from them.

The Library contains 10,000 bound books and 5,000 United States Government documents and unbound reports and pamphlets. All material is on open shelves where students can easily locate it. The Library is open from 8.30 A. M. to 5.30 P. M., Monday to Friday inclusive; Saturday from 8.30 A. M. to 12.30 P. M.; Sunday afternoon from 2.30 to 5.30; and all evenings except Saturday, from 6 to 10.

SCHOLARSHIPS AND SELF AID

High School Scholarships

While the University has no endowment nor loan funds with which to assist students, it has established for each high and preparatory school in Maryland and the District of Columbia one scholarship each year. For

the three counties of Maryland which do not have high schools, Calvert, Charles and St. Mary's, one scholarship each year is given. These scholarships have a value of fifty dollars and are credited to the holder's account.

These scholarships are offered under the following conditions:

1. The holder must be a graduate of a high or preparatory school and qualified to enter the freshman class.

2. The appointment to the scholarships must be made by the county school superintendent upon recommendation of the principal of the high school. In making recommendations high school principals should not only take into consideration class standing but also inability to meet the expenses of a university education.

3. The appointment shall be made for the term normally required to complete the curriculum selected.

4. The scholarship will be forfeited by indifference to scholastic work or by disregard of rules of the University.

5. Scholarships awarded to preparatory schools and to high schools of Baltimore and Washington shall be given on recommendation of the principals direct to the University. Recipients of preparatory school scholarships must be qualified to enter the freshman class.

6. Applicants from Charles, St. Mary's, and Calvert counties may take one of the non-collegiate curriculums or, if entering from another institution, may take one of four-year curriculums leading to a degree.

Fellowships

The University also offers a number of fellowships. These may be given either to its own graduates or the graduates of other colleges who desire to pursue courses in the Graduate School leading to advance degrees. Fellowships are available in the College of Agriculture, College of Engineering and College of Arts and Sciences. These fellowships are worth from $500 to $720 per year.

Industrial Scholarships

There are available each year, as they become vacant, a number of industrial scholarships, in which students receive compensation for attending to certain prescribed duties, such as waiting on the tables in the dining hall, janitor service in the dormitory, and postmaster. Students may frequently earn enough in this way to cover board and lodging.

HONORS AND AWARDS

Honorable mention is given to students for excellence in undergraduate work in the upper one-fifth of each college as follows: The upper one-tenth is given first honors, and the rest second honors, provided that the student's course average is B.

Debating and Oratory

An annual debate is held each year in January between the Poe and New Mercer Literary societies for the "President's Cup," given by Dr. H. J. Patterson.

A gold medal is awarded by the Alumni Association each year to the best debater in the University, the test being a debate between picked teams from the two literary societies.

Th Oratorical Association of Maryland Colleges, consisting of Washington College, Western Maryland College, St. John's College, and University of Maryland offers each year gold medals for first and second places in an oratorical contest that is held between representatives of the four institutions.

Athletics

The class of 1908 offers annually to "the man who typifies the best in college athletics" a gold medal. The medal is given in honor of former President R. W. Silvester and is known as "The Silvester Medal for Excellence in Athletics.

The Military Medal

The class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

The Company Sword

The class of 1897 awards annually to the captain of the best drilled company of the University battalion a silver mounted sword.

The Citizenship Prize

A gold medal is presented annually by H. C. Byrd, a graduate of the class of 1908, to the member of the senior class who during his collegiate career has nearest typified the model citizen and who has done most for the general advancement of the interests of the University.

The Goddard Medal

The James Douglas Goddard Memorial Medal is awarded annually to the man from Prince George's County making the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Annie K. Goddard James of Washington, D. C.

Sigma Phi Sigma Medal

The Delta Chapter of Sigma Phi Sigma Fraternity offers annually a gold medal to that freshman who makes the highest scholastic average during the first two terms.

ORGANIZATIONS

The Alumni Association

The Alumni Association is an organization composed of alumni of the University. This Association has an office at the University and has

several branch associations. It publishes a monthly paper, The State University Alumnus. The Association is active in legislative and other measures for the support of the University.

The Student Assembly

The Student Assembly is composed of all the students and is organized to carry out a system of student self-government. The Student Executive Council is the executive committee of the Student Assembly and acts in co-operation with the faculty in the management of student affairs.

The Dramatic Club

The Dramatic Club is organized for the purpose of presenting at least one play each year. It is made up of students who have had experience in this work since coming to the University or in high school.

Fraternities and Sororities

There are at the University four national fraternities, Kappa Alpha, Sigma Nu, Sigma Phi Sigma, Phi Alpha; three local fraternities, Nu Sigmo Omicron, Delta Psi Omega, Sigma Tau Alpha; two local sororities, Sigma Delta, Lambda Tau.

Societies

Two literary societies are maintained by the students, the Poe and New Mercer. These hold weekly meetings at which regular programs are presented.

The Maryland Chemical Club is made up of students specializing in chemistry. Special lectures by students and specialists in certain branches of chemistry and open discussions of various chemical question are featured.

The Engineering Society is composed of students in the College of Engineering.

The Agricultural Club is organized according to special interests into the Horticultural Society, the Agronomy Society, and the Animal Husbandry Society.

Programs are offered in the Engineering Society and Agricultural Club similar to that of the Liebig Chemical Society, except that the subjects pertain to engineering or agriculture.

Phi Kappa Phi

Phi Kappa Phi is a national honorary fraternity open to honor students in all branches of learning.

Two classes of students may become eligible for election to membership in Phi Kappa Phi. First, any senior who ranks in scholarship among the upper one-fourth of the graduating class; second, any graduate student

who would have been eligible as an undergraduate and who has made an honorable record in graduate work.

The prime object of the fraternity is to emphasize the attainment of scholarship and character and to stimulate mental achievement through the prize of membership.

Alpha Zeta

Alpha Zeta is a National Honorary Agricultural Fraternity open to students who have been in the institution at least five terms and who are in the upper two-fifths of the class so far as scholastic standing is concerned. Students are elected to the fraternity if they show signs of scholarship, and leadership and when they can win the respect of the faculty and student body. The object, therefore, of the fraternity is to foster scholarship, leadership, and good fellowship.

Le Cercle Francais

This club was organized in 1919 by the Department of French. Its membership is composed of the faculty of the department, students pursuing courses in French, and others interested in the study of that language. The aims of the club are to awaken a live interest in French literature, culture, history and customs, and to build up an ease in the use of the language. Although fostered by the College of Arts and Sciences, this club is not restricted to students enrolled therein, but is open to all who are interested in things French.

Clubs

The Rifle Club is affiliated with the National Rifle Association and engages in matches with other colleges and rifle organizations.

The Chess and Checker Club is organized for the promotion of these games among those that engage in them. Annual tournaments are conducted for which gold medals are awarded.

The County Clubs are organizations of students from the same counties. The Baltimore City Club and District of Columbia Club are organizations of the same nature.

The Rossbourg Club is the student organization which has charge of most of the formal dances of the students. This club is open to all students.

The Keystone Club came into being when a score of men from the "Keystone State" found each other on the campus. All Pennsylvanians are eligible. Its aim is to promote a feeling of interest and good fellowship among the students from Pennsylvania.

The Christian Associations

The Young Men's and Young Women's Christian Associations are organized to be of general service to the students. They perform important

functions in matters of obtaining employment for worthy students, in receiving new students, and in helping to maintain generally a high morale and state of good fellowship in the student body.

Student Publications

A weekly five-column newspaper, *The Diamondback*, is published by the students. Besides this the members of the junior class publish an annual book *Terra Mariae*. Both publications reflect the news and atmosphere of general college life.

ADMINISTRATION

The government of the University is vested by law primarily in a Board of Regents, consisting of nine members appointed by the Governor for terms of nine years. The administration of the University is vested in the President. The University Council, composed of the President, the Assistant to the President, the Director of Agricultural Experiment Station, and Director of the Agricultural and Home Economics Extension Service, and the Deans, act as an advisory board to the President on all phases of University work. The faculty of each college or school constitutes a faculty council which passes on all questions that have exclusive relationship to the unit represented.

For purposes of administration and coordination of similar groups of studies, the following educational organizations are in effect:

College of Agriculture.
College of Engineering.
College of Arts and Sciences.
School of Medicine.
The Law School.
School of Dentistry.
School of Pharmacy.
College of Education.
College of Home Economics.
The Graduate School.
The Summer School.
Department of Military Science and Tactics.
Department of Physical Education and Recreation.

The College of Agriculture offers curricula in: (1) General Agriculture; (2) Agronomy; (3) Farm Management; (4) Geology and Soils; (5) Pomology; (6) Vegetable Gardening; (7) Floriculture; (8) Landscape Gardening; (9) Economic Entomology; (10) Two-Year Agriculture; (11) Animal Husbandry; (12) Dairy Husbandry.

The College of Education offers curricula in: (1) Agricultural Education; (2) Home Economics Education; (3) Industrial Education; (4) General Education.

The College of Engineering offers curricula in: (1) Civil Engineering; (2) Mechanical Engineering; (3) Electrical Engineering; (4) Highway Engineering; (5) Sanitary Engineering.

The Graduate School offers courses in any of the subjects in which a graduate may desire to obtain an advanced degree. The Graduate School consists of all students taking graduate work in the various departments. Those qualified to supervise graduate work in the various departments constitute the faculty of the Graduate School, presided over by a research specialist designated as Dean.

The College of Home Economics offers a curriculum in which may be obtained the general principles of home economics, a knowledge of home economics for teaching purposes, or a specialized knowledge of particular phases which deal with the work of the dietitian or institutional manager.

The College of Arts and Sciences offers curricula with majors in: (1) Ancient Languages and Philosophy; (2) Economics; (3) English Language, Literature and Journalism; (4) General Science; (5) History and Political Science; (6) French, German, or Spanish; (7) General, Industrial, and Physical Chemistry; (8) Public Speaking with reference to Special Professions; (9) Zoology; studies also are offered in Music and Library Science.

The Department of Military Science and Tactics has charge of the work of the Reserve Officers' Training Corps unit established by the War Department. During the first two years of the student's stay at the University he is required to take the Basic R. O. T. C. courses. During his junior and senior years he may elect three credit hours in Reserve Officers' Training Corps each term.

The Department of Physical Education and Recreation works in close cooperation with the military department and supervises all physical training, general recreation, and intercollegiate athletics.

The Summer School of six weeks offers courses in subjects given during the regular session of the University, with the exception of Medicine, Dentistry, Pharmacy, and Law, and in special subjects, such as school administration, classroom management and principles of secondary education for high school and elementary school teachers. Certain courses given in the Summer School are of collegiate grade and may be counted toward the bachelor's degree. Advanced courses may count toward the master's degree.

General matter having relationship to offerings of the School of Medicine and the Schools of Pharmacy and Dentistry, and the School of Law will be found elsewhere.

EXTENSION AND RESEARCH

Agriculture and Home Economics

The agricultural and home economics extension service of the University, in co-operation with the United States Department of Agriculture, carries to the people of the State through practical demonstrations conducted by specialists of the College of Agriculture and county agents, the results of investigations in the fields of Agriculture and Home Economics. The organization consists of the administrative forces, including the director, assistant director, specialists and clerical force, the county agricultural demonstration agents, and the home demonstration agents in each county and in the chief cities of the State. The county agents and the specialists jointly carry on practical demonstrations under the several projects in the production of crops or in home-making, with the view of putting into practice on the farms of the State improved methods of Agriculture and Home Economics that have stood the test of investigation, experimentation, and experience. Movable schools are held in the several counties. At such schools the specialists discuss phases of Agriculture and Home Economics in which the people of the respective counties are especially interested.

The work of the Boys' Agricultural Clubs is of especial importance from an educational point of view. The specialists in charge of these projects, in co-operation with the county agricultural agents and the county school officers and teachers, organize the boys of the several communities of the county into agricultural clubs for the purpose of teaching them by actual practice the principles underlying agriculture. The boys hold regular meetings for the discussion of problems connected with their several projects and for the comparison of experiences. Prizes are offered for the stimulation of interest in the work.

The Home Economics specialists and agents organize the girls into clubs for the purpose of instructing them in the principles underlying canning, drying, and preserving fruits and vegetables, cooking, dressmaking and other forms of Home Economics work.

Educational value of the demonstrations, farmers' meetings, movable schools, clubs, and community shows is incalculable. They serve to carry the institution to the farmer and to the home-maker.

General Extension

This phase of the extension service of the University is conducted in co-operation with the United States Bureau of Education, and is intended to make the general branches of educational curriculum of greater service to the people of the State.

Agricultural Experiment Station

Vitally associated with the extension service is the experimental work in agriculture.

In 1847 an act was passed making provision for a State laboratory in which the application of chemistry to agriculture was to be undertaken. In 1858 experimentation was undertaken on the College farm. After two or three years this work was interrupted by the general financial distress of the time and by the Civil War. In 1888, under the provisions of the Hatch Act of the preceding year, the Agricultural Experiment Station was established.

This act states the object and purpose of the experiment stations as follows:

That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

Prior to the establishment of the experiment stations there was practically no agricultural science in this country. The work done by these institutions during the past quarter of a century has given a science of agriculture to teach, and laid a broad foundation for development.

The placing of agricultural demonstrations and extension work on a national basis has been the direct outgrowth of the work of the experiment station.

The students of the University, taking courses in the College of Agriculture, are kept in close touch with the investigations in progress.

The Eastern Branch

The Eastern Branch of the University of Maryland is located at Princess Anne, Somerset County. It is maintained for the education of negroes in agriculture and mechanic arts.

INCOME

The University is supported entirely by funds appropriated for its use by the State and Federal Government. State appropriations prior to the present biennium were very meager but with the awakening of the people to the importance of the institution adequate appropriations to meet all needs are expected. The appropriations from the Federal Government are derived from the original Land Grant Act, from the second Morrill Act, the Nelson Act, the Smith-Hughes and Smith-Lever Acts, and the Hatch

and Adams Acts. The University, with the exception of its professional schools in Baltimore, charges no tuition and consequently has no funds from that source.

ADMISSION

General Statement

An applicant for admission to any of the colleges or schools of the University must be at least sixteen years of age.

Women are admitted to all of the departments under the same conditions and on the same terms as men.

Students may be admitted at the beginning of any term, but should enter, if possible, at the beginning of the fall term (in 1921, September 19). Students can seldom enter the College of Engineering or the Schools of Medicine, Law, Pharmacy or Dentistry to advantage except at the opening of the school year in September, or October, as the case may be.

In general the requirements for admission to the freshman class are the same as those prescribed for graduation by the approved high schools of Maryland. A candidate for admission by *certificate* must be a *graduate* of an approved high school or other accredited school. Applicants who have not been graduated from accredited schools must pass entrance examinations designated by the University Entrance Board.

Number of Units Required

At least fifteen units of high school or other secondary school work in acceptable subjects must be offered by every candidate.

A unit represents a year's study in any subject in a secondary school and constitutes approximately a quarter of a full year's work. It presupposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Two laboratory periods in any science or vocational study are considered as equivalent to one class exercise.

Required and Elective Subjects

*Prescribed Units.

English	3
†Mathematics	2
Science	1
History	1
Total	7

*In addition to the prescribed units listed, two years of any one foreign language are required for admission to the pre-medical curriculum.

† An additional unit of mathematics is required for admission to the College of Engineering. The additional unit should include Algebra, ½, and Solid Geometry, ½.

Elective Subjects

To be selected from the following subjects:

Agriculture	Geology
Astronomy	History
Biology	Home Economics
Botany	Industrial Subjects
Chemistry	Language
Civics	Mathematics
Commercial Subjects	Physical Geography
Drawing	Physics
Economics	Physiology
English	Zoology
General Science	

Methods of Admission

The credit required for admission to the undergraduate departments may be secured as follows:

(a) By certificate
(b) By examination
(c) By transfer from another university or college of recognized standing.

(A) Admission By Certificate

Blank certificates for students wishing to enter the University by certificate from an approved high school or other secondary school may be had of the Registrar. They should be obtained early and filled out and sent to the Registrar for approval as soon as possible after the close of the high school in June.

Accredited Schools

The State Board of Education prepares a list of approved high schools each year. The University accepts graduates from these schools without question. Other preparatory schools may be visited by the high school inspector upon request.

Entrance credit will also be accepted on certificate from the following sources:

(1) From school accredited by the Association of Colleges and Preparatory Schools of the Southern States.
(2) From schools accredited by the North Central Association of Colleges and Secondary Schools.
(3) From schools accredited to the state universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.

(4) From schools approved by the New England College Entrance Certificate Board.
(5) From high schools and academies registered by the Regents of the University of the State of New York.
(6) From College Entrance Examination Board of New York.
(7) From high and preparatory schools on the accredited list of other state boards of education where the requirements for graduation are equivalent to the standard set by the Maryland State Board of Education.
(8) From the state normal schools of Maryland and other state normal schools having equal requirements for graduation.

(B) Admission By Examination

I. The University Entrance Examinations.

The University entrance examinations are given at the University in College Park immediately before the opening of the fall term in September. Students who need to take the examinations should make all necessary preparations several weeks in advance. These examinations cover all the subjects required or accepted for entrance as outlined.

An examination fee of $5.00 is charged for entrance examinations.

II. The Examinations of the College Entrance Examination Board.

The certificate of the College Entrance Examination Board, showing a grade of 60 per cent or higher will be accepted for admission in any elective subject. These examinations will be held only once a year beginning the third Monday in June.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the board on application.

Applications for examinations at points in the United States east of the Mississippi River and at points on the Mississippi River, must be received by the Secretary of the Board at least three weeks in advance of the examinations; applications for examinations at points in the United States west of the Mississippi River must be received at least four weeks in advance of the examinations; and applications for examinations outside of the United States must be received at least six weeks in advance of the examinations.

Applications received later than the time specified will be accepted when it is possible to arrange for the admission of the candidate concerned, but only on payment of $6.00 in addition to the usual fee.

The examination fee is $6.00 for all candidates examined at points in the United States, and $20.00 for all candidates examined outside of the United States. The fee, which cannot be accepted in advance of the application, should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

III. The New York Regents' Examinations.

Credit will be accepted, also from the examinations conducted by the Regents of the University of the State of New York.

(C) Admission By Transfer of Entrance Credits From Other Colleges or Universities

A person who has been admitted to another college or university of recognized standing will be admitted to this University by presenting a certificate of honorable dismissal from the institution from which he comes and an official statement of the subjects upon which he was admitted to such institution, provided that the work appears to be equivalent to that required by the University of Maryland.

Students intending to transfer to the University of Maryland should have sent an official statement of their college credits to the Registrar.

Special Requirements of Colleges and Schools

Requirements for admission to the Schools of Medicine, Law, Pharmacy and Dentistry will be found elsewhere under chapters given to these schools.

Admission To Advanced Standing

A student coming from a standard college or university may secure advanced standing by presenting a statement of his complete academic record certified by the proper officials. This statement must be accompanied by a set of secondary school credentials presented for admission to the college or university. Full credit is given for work done in other institutions when found to be equivalent in extent and quality to that required at this University. An applicant may request examination for advanced credit in any subject. In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded, the University reserves the right to revoke at any time any credit assigned on certificate.

Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree with less than one year of resident work.

Unclassified Students

Mature persons who have had insufficient preparation to pursue any of the four-year curricula may, with the consent of the Committee on Courses, matriculate for such subjects as they are fitted to take. Such students, however, will be ineligible for degrees.

Graduation, Degrees, Diplomas and Certificates

All undergraduate four-year courses lead to the degree of Bachelor of Science or Bachelor of Arts. The total requirements for graduation vary,

according to the type of work in the different colleges, from 204 to 220 term credit hours. A term credit hour is one lecture or recitation each week for one term of twelve weeks; two or three hours of laboratory or field work are counted equivalent to one lecture or recitation. All practical work is scheduled for two or three hours, depending upon the nature of the work. To find full information of requirements, the student should refer to the description of the school in which interested.

Candidates are recommended for graduation after they have completed the prescribed course of study, including all the required work and enough electives to total the required credit hours.

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy in Arts, Doctor of Philosophy in Science, Civil Engineer, Mechanical Engineer, Electrical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, Graduate in Pharmacy and Pharmaceutical Chemist.

Degrees are not granted to the students in the two-year curricula, but at graduation time certificates are awarded.

FEES AND EXPENSES

MAKE ALL CHECKS PAYABLE TO UNIVERSITY OF MARYLAND FOR EXACT AMOUNT OF BILLS FOR TERM CHARGES.

The charges for each term must be paid at the beginning of the term. Students will not be admitted to classes until payment has been made or until satisfactory arrangements have been made for deferring payment.

The estimated average annual expenses of undergraduates at College Park are as follows:

	First Term	*Second Term*	*Third Term*	*Total for Year*
Fixed charges	$20.00	$20.00	$20.00	$60.00
*Matriculation Fee (paid once)	5.00			5.00
Board (36 weeks @ $6.75)	87.75	87.75	67.50	243.00
Lodging (38 weeks @ $1.85)	24.05	24.05	22.20	70.30
Laundry (36 weeks @ $0.60)	7.80	7.20	6.60	21.60
†Athletic Fee	15.00			15.00
Totals	$159.60	$139.00	$116.30	$414.90

* Paid once by students on first entering, beginning first term 1922-1923.

† These fees constitute a fund which is collected from all students in the University at College Park for maintenance of athletics, and is turned over in toto to the Athletic Board for disbursement.

Non-residents, except from the District of Columbia, will be charged a fee of $10.00 per term or $25.00 per year if paid in advance.

Students taking pre-Medical work will be charged a special fee of $10.00 per term.

The above does not take into consideration the cost of books, supplies and personal needs. This depends largely on the tastes and habits of the individual student. Books and supplies average about $40.

The fixed charges made to all students are a part payment of overhead expenses, such as janitor service, hospital and doctor's fees, general laboratory fees, library, physical training, etc.

Board, lodging and other charges may vary from term to term, but every effort will be made to keep expenses as low as possible.

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

Board and lodging may be obtained at boarding houses or in private families if desired.

Students rooming outside the University may obtain board and laundry at the same rates as those living in the dormitories.

Day students may get lunch at nearby lunch rooms.

All the University property in possession of the individual student will be charged against him, and the parent or guardian must assume responsibility for its return without injury other than results from ordinary wear.

All students assigned to dormitories are required to provide themselves with one pair of blankets for single bed, two pairs of sheets for single bed, four pillow cases, six towels, one pillow, two laundry bags, one broom and one waste basket.

Special Fees

Bacteriology Laboratory fee	$2.00
Fee for special condition examination	1.00
Fee for changes in registration after first week of term	2.00
Fee for failure to register within seven days after opening of term	2.00
Graduation fee payable prior to graduation	10.00
Certificate fee payable prior to graduation	5.00
Fee for failure to file schedule card in Registrar's office within seven days after opening of term	2.00

No diploma will be conferred upon, nor any certificate granted to, a student who is in arrears in his accounts.

By vote of the Class Presidents' Council of the Baltimore Schools and the Student Council of the College Park Schools, the University is requested to include a uniform fee of $6.00 to cover the cost of subscription to the student publications, "Terra Mariae" and the "Diamondback" each year. The University will collect this fee and turn it over to the organization in charge of these publications. Each student is earnestly requested to cooperate in this way.

Graduate Fees

Each graduate student is subject to a matriculation fee of $10.00, a fixed charge of $1.00 per term credit hour, and a diploma fee of $10.00.

Withdrawals

When a student desires to withdraw from the University, he is required to secure from his Dean a written approval, which must be presented to the Registrar. CHARGES FOR FULL TIME WILL BE CONTINUED AGAINST HIM UNLESS THIS IS DONE.

Students withdrawing before the end of any term will be charged $7.00 per week for board and $2.00 per week for lodging for the time during the term preceding their withdrawal.

Refunds

No fixed charge will be refunded.

No laboratory fee will be refunded after the middle of the term.

The low charge for board at the dining hall is made possible only by the use of the term basis in figuring costs. The overhead is fixed for the term and no refunds can be made for short absences without a loss to the dining hall and to the students who eat there. Therefore, no refunds will be made except in case of withdrawal or prolonged absence due to sickness or unavoidable cause.

* * * * * *

The fees and expenses for Schools located in Baltimore are:

	Matriculation Fee	*Tuition*	*Laboratory*
Medical School	$5.00 per term	$250.00 per year	
Dental School	5.00 per year	200.00 per year	$5.00
Pharmacy School	5.00 per year	175.00 per year	5.00
Law School	10.00 per year	100.00 per year	
Extension Course in Commerce—			
Day Course	5.00 per year	180.00 per year	
Evening Course	5.00 per year	90.00 per year	

There are no dormitories connected with the Baltimore Schools. The average cost of living per year in that city is $600.00

A breakage fee of $10.00 is charged to each student in the Medical School and School of Pharmacy.

(Note: For special fees for Baltimore Schools, see bulletins issued by these schools.)

ADMINISTRATIVE PROCEDURE

Date of Registration and Penalty for Late Registration

Registration for the fall term takes place during the first two days of the term. Students register for the second term before leaving for their Christmas holidays and for the third term during the last two weeks of the winter term.

After seven days from the opening of a term fees are imposed for a change of registration or for late registration.

Students, who for any reason are more than seven days late in registering, must secure permission from the instructors in charge for admission to courses. Such permission must be given in writing to the student's dean before course cards will be issued.

Physical Examination and Physical Training

All students who enter the University undergo a physical examination by the physician in charge. This is conducted in cooperation with the Military Department under the direction of which most of the work in physical training is done. The examination also is a measure for protecting the health of the student body.

Maximum and Minimum Schedule

The prescribed number of credit hours that a student ordinarily may carry ranges from 15 to 19. No student may register for less than the ordinary number without permission from his dean.

A student who obtains an average grade of "B" may, with the permission of his dean, be allowed to carry such additional courses as may be scheduled. This privilege is forfeited if the student's average grade falls below "B".

No regular student working for a degree may carry less than 12 credit hours.

Examinations

No final examinations are given. At least two unannounced tests are given in each course per term. The final grade is derived by combining the average daily grade and the average test grades.

Grading System

Students are graded with the following marks: A, B, C, D, E, and F. A, B, C, and D are passing; E represents a condition and F a failure.

Student Advisory and Honor System

A Committee comprising five members of the faculty acts as the advisory board to the Students' Executive Council of the Students' Assembly. The Students' Executive Council, with the aid of the Advisory Board manages all student affairs. The Honor System is in effect for all students, and each student always is on his honor to live up to the highest principles of democratic government.

The Students' Assembly

All students assemble in the Auditorium at 11:20 o'clock every Wednesday. Every other Wednesday is turned over to the students to transact

business that concerns the whole student body. The Department of Public Speaking arranges the programme for the remaining Wednesdays. Noteworthy speakers from various parts of the United States are called upon to talk to the students.

General Suggestions to New Students

Candidates for admission to the University should correspond with the Registrar at College Park, who in turn will supply them with the necessary forms for transferring preparatory credits. It is advisable for prospective students to dispose of the preliminaries early in the year in order to prevent disappointments. Often a student comes to the University without taking the preliminary steps only to find that he does not have enough credits to enter. The Registrar is always glad to advise with the students concerning their preparations. The Registrar sends out a general statement of the procedure for new students to follow after they are duly admitted to the University.

The College of Agriculture

The teaching of a rational, practical system of farming is the primary aim of the College of Agriculture. The permanent prosperity of rural citizens is in direct proportion to the producing capacity of the land. The most successful farmer is the one who can produce a maximum quantity per acre of the best quality of agricultural products at a minimum cost and dispose of them at the markets to the best advantage. The modern farmer must know the kinds of plants to grow and how to improve them; how to maintain orchards, gardens, and attractive surroundings; something of the soil, its cultivation and conservation of fertility; how to combat plant diseases and insect pests; the selection, breeding, and feeding of live stock; the marketing of farm products; modern farm buildings, farm equipment and conveniences of the home; and finally how to be leaders and promote good citizenship in rural life.

The curricula are planned to give the student a general knowledge of all phases of agriculture and related sciences, but at the same time afford an opportunity to specialize along the lines in which he is particularly interested. The plan provides for those who wish to take up professions such as teaching, research, and county agent work, as well as farming.

Graduation, Degrees and Certificates

The College of Agriculture confers the degree of Bachelor of Science.

Two hundred and ten term credit hours are required for graduation. The courses required vary according to the departments in which the student elects to specialize.

The non-collegiate, two-year curriculum leads to a Certificate in Agriculture.

Departments

The College of Agriculture includes the following departments: (1) Agronomy (including Forage Crops, Grain Crops, Genetics); (2) Agricultural Education (see College of Education); (3) Animal Husbandry; (4) Animal Pathology and Veterinary Medicine; (5) Bacteriology and Sanitation; (6) Dairy Husbandry; (7) Entomology and Bee Culture; (8) Farm Equipment; (9) Farm Management; (10) Forestry; (11) Horticulture (including Pomology, Vegetable Gardening, Landscape Gardening, and Floriculture); (12) Plant Pathology; (13) Plant Physiology and Biochemistry; (14) Poultry Husbandry; (15) Soils.

Agricultural Experiment Station

The College of Agriculture works in cooperation with the Agricultural Experiment Station. Most of the subject matter in agricultural courses is

tested by the station or furnished as original from its researches. Methods and material which are valuable in one state are often worthless in another, and the station makes it a point to find what is best for the State of Maryland.

The general farm, orchards, gardens, and herds at the Experiment Station are available for laboratory and class use by the college.

Fellowships

Graduate Fellowships which carry remuneration of $500 to $1,000 yearly are available to graduate students. Students who hold these fellowships spend certain time assisting in classes and laboratories. The rest of the time may be used for original investigation and assigned to study, the time required for a degree depending upon the nature of the fellowship held.

FARM PRACTICE

Students without farm experience do not, as a rule, secure full benefit from any of the agricultural courses. A committee has been appointed for the purpose of assisting all students coming to the college without farm training to obtain a fair knowledge of actual farm practice. Some time during each year the committee will examine each member of the freshman class and any upperclassmen who have not already satisfied the farm practice requirements.

All students must pass a satisfactory farm practice examination before they will be allowed to enter their senior year. Those not able to pass this examination will be required to spend at least three months on a farm selected by or having the approval of the committee. If the student has had no farm experience whatsoever before entering college, he may be required to spend six to nine months on a farm.

The committee reserves the right also to call on all students so placed for written reports showing the experience gained while on these farms.

Curricula In Agriculture

All students registered for Agriculture take the same work in the freshman and sophomore years, except those registering for Landscape Gardening, Floriculture and Animal Pathology and Veterinary Medicine. At the end of the sophomore year they may elect to specialize along the lines in which they are particularly interested.

The First Two Years:

FRESHMAN YEAR — *Term*:	*I*	*II*	*III*
Gen'l Chem. and Qual. Analysis (Gen. Chem. 101-103)	4	4	4
*General Zoology (Zool. 101-102)	4	2	..
†General Botany (Bot. 101)	..	2	4
Composition and Rhetoric (Eng. 101-103)	3	3	3
Public Speaking (Pub. Sp. 101-103)	1	1	1
(Elect one of the following groups)			
Group A			
Cereal Crops (Agron. 101)	4	..	..
Animal Husbandry (A. H. 101)	..	4	..
Elementary Vegetable Gardening (Hort. 111)	..	..	4
Group B			
Language	3	3	3
Group C			
Mathematics	3	3	3
Basic R. O. T. C. (M. I. 101)	2	2	2

*Repeated during second half year.
†Offered also during first half year.

SOPHOMORE YEAR — *Term*:	*I*	*II*	*III*
Plant Physiology (Plt. Phys. 101-102)	..	4	3
General Geology (Geol. 101)	3	..	..
Principles of Soil Management (Soils 101-102)	..	3	3
Organic Chemistry (Org. Chem. 103-104)	3	3	..
General Entomology (Ent. 101)	..	..	3
Feeds and Feeding (A. H. 102a-102b)	3	3	..
Principles of Dairying (D. H. 101)	..	..	4
Forage Crops (Agron. 102)	..	..	4
Elementary Pomology (Hort. 101)	4	..	..
Physics (Physics 107-108)	3	3	..
Basic R. O. T. C. (M. I. 102)	2	2	2

AGRONOMY

The curriculum in agronomy aims to give the student the fundamental principles of crop production. Special attempt is made to adapt the work to the young man who wishes to apply scientific principles of field crop culture and improvement on the farm. At the same time enough freedom is given the student in the way of electives so that he can register for subjects which might go along with the growing of crops on his particular farm. A student graduating from the course in agronomy should be well fitted for general farming, investigational work in the State or Federal Experiment Stations, or county agent work.

The Agronomy Department has a large, well equipped laboratory in the new Agricultural Building and a greenhouse for student use, besides free access to the Experiment Station fields and equipment.

Curriculum

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Grading Farm Crops (Agron. 103)	..	3	..
Genetics (Agron. 106)	..	4	..
General Bacteriology (Bact. 101-102)	3	3	..
Soil Bacteriology (Soils 107)	..	..	3
General Plant Pathology (Plt. Path. 101)	3	..	..
Soil Fertility and Fertilizers (Soils 105)	..	..	3
Plant Anatomy (Morph. and Myc. 101)	3	..	..
Agricultural Chemistry (Ind. Chem. 101)	..	..	4
Technical Writing (Eng. 104-106)	2	2	2
Elements of Economics (Econ. 101-101)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Electives	3	2	2

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Crop Breeding (Agron. 109)	..	..	3
Methods of Crop Investigations (Agron. 108)	3	..	..
Cropping Systems and Methods (Agron. 107)	..	2	..
Seminar (Agron. 110-111)	..	1	1
Soil Survey and Classification (Soils 106)	3	..	..
Farm Management (F. M. 101-102)	3	3	..
Farm Machinery (F. E. 101)	3	..	..
Grain Judging (Agron. 104)	..	1	..
Drainage (F. E. 108)	..	..	3
Tuber and Root Crops (Hort. 112)	3	..	..
Electives	2	10	10

AGRICULTURAL EDUCATION

The Department of Agricultural Education was organized primarily to train students who are preparing to teach agriculture in secondary schools. In addition to regular entrance requirements of the University, students electing to specialize in Agricultural Education must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

Students must arrange their work so that approximately forty per cent will be spent on technical agriculture, twenty-five per cent on scientific subjects, twenty per cent on subjects of a general educational character and from twelve to fifteen per cent on subjects pertaining to professional education.

(For detailed description of the curriculum in agricultural education see the College of Education.)

ANIMAL HUSBANDRY

The courses in Animal Husbandry are organized with the idea of equipping men as owners, superintendents, or managers of general or special live stock farms. Special attention is given to the care, feeding, breeding and management of live stock and to the economics of the live stock industry. Opportunity for specialization is offered to those who may desire to become instructors or investigators in Animal Husbandry.

Herds of cattle and swine are maintained at the University. In addition, there are available for use in instruction, the herds of live stock owned by the Federal Bureau of Animal Industry at Beltsville, Maryland. Through the courtesy of Maryland breeders, some private herds are also available for inspection and instruction.

Curriculum

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Technical Writing (Eng. 104-106)	2	2	2
Elements of Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Anatomy and Physiology (V. M. 101)	3	..	..
General Bacteriology (Bact. 101-103)	3	3	..
Management Dairy Young Stock (A. H. 103)	..	..	3
Swine Production (A. H. 105)	3	..	..
Beef Production (A. H. 107)	..	3	..
Sheep Production (A. H. 108)	..	..	3
Principles of Breeding (A. H. 104)	..	..	4
Electives	3	6	3

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Farm Management (F. M. 101-102)	3	3	..
Horse and Mule Production (A. H. 109)	3	..	..
Animal Diseases (V. M. 102)	..	..	4
Nutrition (A. H. 119)	..	..	3
Animal Genetics (A. H. 118)	3	..	..
Farm Machinery (F. E. 101)	3	..	..
Gas Engines (F. E. 102)	..	3	..
Tractors (F. E. 103)	..	..	3
Seminar (A. H. 114)	..	..	1
Electives	5	11	6

ANIMAL PATHOLOGY AND VETERINARY MEDICINE

The increasing need of veterinarians thoroughly trained in animal husbandry as well as in medicine and surgery makes it necessary to give such instruction as will fit the student to care for valuable live stock and in-

telligently advise their owners in matters pertaining to successful animal husbandry. The six years course leading to the degrees of B. S. and D. V. M., as outlined below, should meet this need.

Curriculum

FRESHMAN YEAR — *Term:*	*I*	*II*	*III*
Gen. Chem. and Qual. Anal. (Gen. Chem. 101-103)	4	4	4
General Zoology (Zool. 101-102)	4	4	..
General Botany (Bot. 101)	..	..	4
Composition and Rhetoric (Eng. 101-103)	3	3	3
Public Speaking (Pub. Sp. 101-103)	1	1	1
Cereal Crops (Agron. 101)	4	..	..
Animal Husbandry (A. H. 101)	..	4	..
Elementary Vegetable Gardening (Hort. 111)	..	..	4
Basic R. O. T. C. (M. I. 101)	2	2	2

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
Beef Production (A. H. 107)	..	3	..
Management of Dairy Young Stock (A. H. 103)	..	..	3
General Geology (Geol. 101)	3	..	..
Soils (Soils 101-102)	..	3	3
Organic Chemistry (Gen. Chem. 112-113)	3	3	..
Entomology (Zool. 107)	..	..	3
Feeds and Feeding (A. H. 102a-102b)	3	3	..
Principles of Dairying (D. H. 101)	..	..	4
Forage Crops (Agron. 102)	..	..	4
Elementary Pomology (Hort. 101)	4	..	..
Physics (Physics 107-108)	3	3	..
Basic R. O. T. C. (M. I. 102)	2	2	2

BACTERIOLOGY AND SANITATION

The present organization of this Department was brought about with two main purposes in view. The first is to give all the students of the University an opportunity to obtain a general knowledge of the subject. This is of prime importance, as Bacteriology is a basic subject and of as much fundamental importance as Physics or Chemistry. The second purpose, and the one for which this curriculum was designed, was to fit students for positions along bacteriological lines. This includes Dairy Bacteriologists and Inspectors; Soil Bacteriologists; Federal, State, and Municipal Bacteriologists for Public Health positions; Research positions; Commercial positions, etc. At present, the demand for individuals qualified for this work is much greater than the supply, and with the development of the field, this condition is bound to exist for some time.

The Staff of the Department is made up of well trained and experienced men. The equipment and facilities for carrying on the work are excellent.

Curriculum

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
General Plant Pathology (Plt. Path. 101)	3	..	..
General Bacteriology (Bact. 101-103)	3	3	3
Mycology (Morph. and Mycol. 106)	..	..	3
Physiological Chemistry (Bio. Chem. 101)	4	..	..
Technical Writing (Eng. 104-106)	2	2	2
General Entomology (Ent. 101)	..	2	..
Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Electives	2	5	6

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Dairy Bacteriology (Bact. 104-106)	3	3	3
Advanced Bacteriology (Bact. 107-109)	3	3	3
Market Milk (D. H. 107)	3	..	..
Milk Testing (D. H. 108)	..	3	..
Soil Bacteriology (Soils 107)	..	..	3
Seminar (Bact. 117-119)	1	1	1
Farm Management (F. M. 101-102)	3	3	..
Electives	4	4	7

DAIRY HUSBANDRY

The courses in Dairy Husbandry are so organized as to give the student a working knowledge of the basic principles underlying successful dairy production, market milk, dairy manufacturing and marketing. A dairy herd is maintained for experimental purposes, as well as for the purpose of teaching the care, feeding and management of dairy cattle. Graduates from these courses should be fitted to take up dairy farming, teaching or experiment station work. Graduate courses are designed to meet the needs of those who will take up teaching or research work.

Students are sent throughout the State to supervise advanced registry tests as well as to study general conditions as they exist on some of the leading dairy farms.

Curriculum

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Technical Writing (Eng. 104-106)	2	2	2
Elements of Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 103)	..	..	3
General Bacteriology (Gen. Bact. 101-103)	3	3	3
Anatomy and Physiology (V. M. 101)	3	..	..
Dairy Production and Barn Practice (D. H. 104)	4	..	..
Advanced Registry and Association Work (D. H. 102)	2	..	..
Farm Dairying (D. H. 105)	..	3	..
Commercial Dairying (D. H. 106-107)	..	3	3
Judging Dairy Products (D. H. 103)	..	..	2
Principles of Breeding (A. H. 104)	..	..	4
Electives	..	3	..

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Dairy Bacteriology (Bact. 104-106)	3	3	3
Market Milk (D. H. 108)	3	..	..
Animal Diseases (V. M. 102)	..	..	4
Advanced Testing (D. H. 109)	..	3	..
Thesis (D. H. 111-113)	2	2	2
Farm Machinery (F. E. 101)	3	..	..
Gas Engines (F. E. 102)	..	3	..
Tractors (F. E. 103)	..	..	3
Electives	6	6	5

ENTOMOLOGY AND BEE CULTURE

This department is concerned with the teaching of entomology to all agricultural students as basic for future work in economic entomology and for its pedagogic and cultural value.

The success of the farmer and particularly the fruit grower is in a large measure dependent upon his knowledge of the methods of preventing or combating the pests that menace his crops each year. Successful methods of control are emphasized in the economic courses.

There is an ever increasing demand for trained entomologists. The entomological work of the Experiment Station, the Extension Service, the College of Agriculture and the office of the State Entomologist being in one administrative unit, enables the student in this department to avail himself of the many advantages accruing therefrom. Advanced students have special advantages in that they may be assigned to work on station projects already under way.

Courses in beekeeping are offered and new courses will be added as the demand warrants. The field for specialists in beekeeping is especially attractive now and commercial beekeeping is productive of greater profits each year.

Curriculum

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
Embryology (Zool. 104-105)	4	4	..
General Entomology (Ent. 101)	..	..	3
Physics (Physics 104-106)	4	4	4
English (Eng. 104-106)	2	2	2
Organic Chemistry (Org. Chem. 103-104)	3	3	..
R. O. T. C. (M. I. 102)	2	2	2
Electives	3	3	7

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Insect Morphology (Ent. 102)	2	..	..
Economic Entomology (Ent. 103-104)	..	4	4
General Bacteriology (Bact. 101-103)	3	3	3
Electives	12	10	10

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Economic Entomology (Ent. 105-107)	5	5	5
Thesis (Ent. 109-111)	2	2	2
Electives	10	10	10

NOTE: The Freshman year is the same as for other agricultural students.

FARM MANAGEMENT

In this department are grouped courses in farm management, agricultural economics, marketing, and the kindred subjects of rural organization.

Farm management has been defined as the business of the individual farmer to so organize his business as to produce the greatest continuous profit. This can be done, however, only when the organization is in accordance with the broader principles of agricultural economics. It requires not only knowledge of the many factors involved in the production of crops and animals, but also administrative ability to coordinate them into the most efficient farm organization.

The aim of the farm management course is to assist the student to perceive the just relationship of the several factors of production and disposition as applicable to local conditions and to develop in him executive and administrative capacity. Students well trained in farm management are in demand for county agent work, experiment station or United States Government investigation, and college or secondary school teaching.

Agricultural economics considers the fundamental principles underlying production, distribution, and consumption, more especially as they bear upon agricultural conditions. Labor, land and capital are considered in their relationship to agriculture. The need for more exact business records on the farm is forcing itself imperatively on the minds of all students of agricultural economics. To meet this demand a course is offered in farm

accounting. This course is not elaborate but is designed to meet the demand for a simple yet accurate system of farm business records.

The comparative isolation of country life tends naturally to individual rather than cooperative effort. The course in rural organization aims to show the student the advantages of combined effort in country communities, to sketch the history of rural organization with a discussion of its failures and successes, and to point out practical method of organizing rural communities for mutual and individual benefit.

Curriculum

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Technical English (Eng. 104-106)	2	2	2
Principles of Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Fertilizers (Soils 105)	..	..	3
Farm Accounting (A. E. 103)	..	..	3
Farm Machinery (F. E. 101)	3	..	..
Bacteriology (Bact. 101-102)	3	3	..
Drainage (F. E. 108)	..	..	4
Grading Farm Crops (Agron. 103)	..	3	..
Electives	6	6	3

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Farm Management (F. M. 101-102)	3	3	..
Markets and Marketing (A. E. 102)	3	..	..
Commercial Law (Econ. 110-112)	3	3	3
Community Study (R. O. 101-103)	2	2	2
Principles of Rural Organzation (R. O. 104)	..	..	3
Electives	6	9	9

HORTICULTURE

There are several reasons why the State of Maryland should be pre-eminent in the different lines of horticulture and offers such excellent opportunities for horticultural enterprises. A few of the more evident ones are the wide variation in soil and climate from the Eastern Shore to the mountainous counties of Allegany and Garrett in the west, the nearness to all of the large eastern markets and the large number of railroads, interurban lines and waterways, all of which combine to make marketing easy and comparatively cheap.

The Department of Horticulture offers four major lines of work, namely: Pomology, Vegetable Gardening, Floriculture and Landscape Gardening. Students wishing to specialize in horticulture can arrange to take either a general course during the four years or enough work is offered in each division to allow students to specialize during the last two years in any

of the four divisions. The courses have been planned to cover such subject matter that upon their completion students should be fitted either to engage in commercial work, county agent work, or teaching and investigational work in the state and federal institutions.

The department has at its disposal about twenty acres of ground devoted to vegetable gardening, eighteen acres of orchards, small fruits and vineyards, and twelve greenhouses, in which flowers and forcing crops are grown. Members of the teaching staff are likewise members of the experiment station staff and thus students have an opportunity to become acquainted with the research which the department is carrying on. Excellent opportunity for investigating new problems is afforded to advanced undergraduates and to graduate students.

Curricula

Students who intend to specialize in pomology or vegetable gardening are required to take the same subjects which other agricultural students take during the first two years. Students who specialize in floriculture or landscape gardening, however, will take a slightly different curricula. It is felt that such students require certain special courses, which it is unnecessary to require of all agricultural students. The curricula follow:

Pomology

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
General Floriculture (Hort. 121)	3	..	..
Principles of Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Technical Composition (Eng. 104-106)	2	2	2
Systematic Pomology (Hort. 104)	3	..	..
Small Fruit Culture (Hort. 106)	..	..	3
Fruit and Vegetable Judging (Hort. 108)	2	..	..
General Plant Pathology (Plt. Path. 101)	3	..	..
Horticultural Entomology (Ent. 115)	..	..	3
Genetics (Agron. 106)	..	4	..
Electives	1	8	6

SENIOR YEAR — *Term:*	*I*	*II*	*III*
General Landscape Gardening (Hort. 131)	..	..	3
Farm Management (F. M. 101-102)	3	3	..
Commercial Fruit Growing (Hort. 102)	3	3	..
Economic Fruits of the World (Hort. 107)	..	3	..
Advanced Fruit Judging (Hort. 109)	1	..	..
Advanced Practical Pomology (Hort. 105)	1	..	..
Horticultural Breeding Practice (Hort. 142)	..	..	1
Horticultural Research and Thesis (Hort. 143-145)	2	2	2
Horticultural Seminar (Hort. 146-148)	1	1	1
Electives	6	5	10

Vegetable Gardening

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Principles of Economics (Econ. 101-102)	3	3	..
Agricultural Economics (A. E. 101)	..	..	3
Commercial Vegetable Gardening (Hort. 113-114)	3	3	..
Small Fruit Culture (Hort. 106)	..	..	3
General Plant Pathology (Plt. Path. 101)	3	..	..
Horticultural Entomology (Ent. 115)	..	..	3
Genetics (Agron. 106)	..	4	..
Vegetable Forcing (Hort. 118)	..	..	3
Technical Composition (Eng. 104-106)	2	2	2
Advanced Plant Pathology (Plt. Path. 106)	..	4	..
General Floriculture (Hort. 121)	3	..	..
Electives	3	1	3

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Tuber and Root Crops (Hort. 112)	3	..	..
Systematic Olericulture (Hort. 116)	3	..	..
Advanced Vegetable Gardening (Hort. 117)	..	..	1
Horticultural Breeding Practice (Hort. 142)	..	..	1
General Landscape Gardening (Hort. 131)	..	..	3
Horticultural Research and Thesis (Hort. 143-145)	2	2	2
Horticultural Seminar (Hort. 146-148)	1	1	1
Electives	8	14	9

Floriculture

SOPHOMORE YEAR — *Term:*	I	*II*	*III*
Plant Physiology (Plt. Phys. 101-102)	..	4	3
General Geology (Geol. 101)	3	..	..
Soil Physics and Management (Soils 101-102)	..	3	3
Organic Chemistry (Org. Chem. 103-104)	3	3	..
Entomology (Ent. 101)	..	..	3
Elementary Floriculture (Hort. 122)	..	3	..
Elementary Pomology (Hort. 101)	4	..	..
Technical Composition (Eng. 104-106)	2	2	2
Basic R. O. T. C. (M. I. 102)	2	2	2
Electives	4	1	5

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Greenhouse Management (Hort. 123-124)	3	3	..
Floricultural Practice (Hort. 125)	..	..	1
Greenhouse Construction (Hort. 126)	..	2	..
Garden Flowers (Hort. 129)	..	..	3
Plant Materials (Hort. 132-133)	2	..	2
Principles of Economics (Econ. 101-102)	3	3	..
General Plant Pathology (Plt. Path. 101)	3	..	..
Horticultural Entomology (Ent. 115)	..	..	3
Systematic Botany (Morph. and Myc. 109)	3	..	..
Vegetable Forcing (Hort. 118)	..	..	3
General Landscape Gardening (Hort. 131)	..	..	3
Elements of Landscape Design (Hort. 134)	..	3	..
Electives	3	6	2

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Commercial Floriculture (Hort. 126-127)	3	3	..
Horticultural Breeding Practice (Hort. 142)	..	..	1
Horticultural Research and Thesis (Hort. 143-145)	2	2	2
Horticultural Seminar (Hort. 146-148)	1	1	1
Horticultural Seminar (Hort. 146-148)	1	1	1
Electives	11	11	11

Note: The Freshman year is the same as for other agricultural students.

Landscape Gardening

FRESHMAN YEAR — *Term:*	*I*	*II*	*III*
Gen. Chem. and Qual. Anal. (Gen. Chem. 101-103)	4	4	4
General Zoology (Zool. 101-102)	4	4	..
General Botany (Bot. 101)	..	..	4
Composition and Rhetoric (Eng. 101-103)	3	3	3
Public Speaking (Pub. Speak. 101-103)	1	1	1
Advanced Algebra (Math. 104)	3	..	..
Plane Trigonometry (Math. 107)	..	3	..
Plane Analytic Geometry (Math. 108)	..	..	3
Basic R. O. T. C. (M. I. 101)	2	2	2

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
Plant Physiology (Plt. Phys. 101-102)	..	4	3
General Geology (Geol. 101)	3	..	..
Soil Physics and Management (Soils 101-102)	..	3	3
Organic Chemistry (Org. Chem. 103-104)	3	3	..
Entomology (Ent. 101)	..	..	3
Elementary Pomology (Hort. 101)	4	..	..
Plane Surveying (Sur. 101-103)	1	2	2
General Landscape Gardening (Hort. 131)	..	..	3
Freehand Drawing (Dr. 101)	1	..	..
Mechanical Drawing (Dr. 102)	1	1	..
Basic R. O. T. C. (M. I. 102)	2	2	2
Electives	2	2	1

JUNIOR YEAR	*Term:*	*I*	*II*	*III*
Plant Materials (Hort. 132-133)		2	..	2
History of Landscape Gardening (Hort. 138)		..	1	..
Elements of Landscape Design (Hort. 134)		..	3	..
Garden Flowers (Hort. 128)		..	..	3
Principles of Economics (Econ. 101-102)		3	3	..
Technical Composition (Eng. 104-106)		2	2	2
Horticultural Entomology (Ent. 115)		..	..	3
General Plant Pathology (Plt. Path. 101)		3	..	..
Systematic Botany (Morph and Myc. 109)		3	..	..
Drainage (F. E. 108)		..	..	3
Electives		4	8	4

SENIOR YEAR	*Term:*	*I*	*II*	*III*
Landscape Design (Hort. 135-136)		3	3	..
Landscape Practice (Hort. 137)		..	..	3
Civic Art (Hort. 139)		2	..	..
Horticultural Research and Thesis (Hort. 143-145)		2	2	2
Horticultural Seminar (Hort. 146-148)		1	1	1
Electives		9	11	11

SOILS

The Department of Soils gives instruction in the physics, chemistry, and biology of the soil, the courses being designed to equip the future farmer with a complete knowledge of his soil and also to give adequate training to students who desire to specialize in soils. Students who are preparing to take up research or teaching are expected to take graduate work in addition to the regular undergraduate courses that are offered. The department possesses the necessary equipment and facilities for the instruction in these subjects, and in addition affords opportunities for the student to come in contact with the research at the Agricultural Experiment Station, especially in the pot culture laboratories and on the experimental fields at the station and in other parts of the State.

Graduate students will find unusual opportunities to fit themselves for teaching soils in agricultural colleges, to conduct research in experiment stations, and to carry on work with the Bureau of Soils, United States Department of Agriculture.

Curriculum

JUNIOR YEAR	*Term:*	*I*	*II*	*III*
Technical Composition (Eng. 104-106)		2	2	2
Principles of Economics (Econ. 101-102)		3	3	..
Agricultural Economics (A. E. 101)		..	..	3
General Bacteriology (Bact. 101-102)		3	3	..
Soil Bacteriology (Soils 107)		..	..	4
Quantitative Analysis (Gen. Chem. 107-108)		3	3	..
Soil Fertility and Fertilizers (Soils 103-105)		3	3	3
Electives		3	3	5

SENIOR YEAR	*Term:*	*I*	*II*	*III*
Farm Management (F. M. 101-102)		3	3	..
Methods of Crop Investigations (Agron. 108)		3	..	..
Cropping Systems (Agron. 107)		..	2	..
Soil Survey and Classification (Soils 106)		3	..	..
Soil Technology (Soils 111-113)		3	3	3
Drainage (F. E. 108)		..	..	3
Seminar (Soils 115)		..	1	1
Methods of Soil Investigations (Soils 114)		..	..	2
Electives		5	8	8

CURRICULUM FOR GENERAL AGRICULTURE

Those who do not care to specialize in any particular phase of agriculture will follow this curriculum.

JUNIOR YEAR	*Term:*	*I*	*II*	*III*
Elements of Economics (Econ. 101-102)		3	3	..
Agricultural Economics (A. E. 101)		..	..	3
Technical Writing (Eng. 104-106)		2	2	2
Genetics (Agron. 106)		..	4	..
General Plant Pathology (Plt. Path. 101)		3	..	..
Soil Fertility and Fertilizers (Soils 105)		..	..	3
Dairy Production and Barn Practice (D. H. 102)		4	..	..
Principles of Breeding (A. H. 104)		..	..	4
General Bacteriology (Bact. 101-102)		3	3	..
Farm Poultry (P. H. 101)		..	..	3
Electives		2	5	2

Suggested Electives

Agricultural Chemistry (Ind. Chem. 101)		..	..	4
Commercial Fruit Growing (Hort. 102-103)		3	3	..
Commercial Vegetable Gardening (Hort. 113-115)		3	3	..
Small Fruit Culture (Hort. 106)		..	..	3
Farm Dairying (D. H. 104)		..	3	..
Judging Dairy Production (D. H. 106)		..	..	2
Advanced Judging (A. H. 110)		..	..	2
Fruit and Vegetable Judging (Hort. 108)		2	..	..
Grading Farm Crops (Agron. 103)		..	3	..

SENIOR YEAR	*Term:*	*I*	*II*	*III*
Farm Management (F. M. 101-102)		3	3	..
Drainage (F. E. 108)		..	..	3
Farm Forestry (For. 101)		..	..	3
Cropping Systems and Methods (Agron. 107)		..	2	..
Farm Machinery (F. E. 101)		3	..	..
Gas Engines (F. E. 102)		..	3	..
Tractors and Trucks (F. E. 103)		..	..	3
Electives		11	9	8

SHORT COURSE IN AGRICULUTRE

A. Students who have had four years of high school training or its equivalent may follow a two-year curriculum of regular college courses designated by the dean. A certificate is granted by the college upon completion of the work. If, after the student has been awarded a certificate, he is desirous of taking work for a degree, he may continue for two years with a regular college curriculum.

B. Another two-year curriculum, commonly known as "The Two-Year Agricultural Course" is sub-collegiate in nature. To enter this two-year work the applicant must have preparation at least equal to the work given in the seventh grade of the public schools. At the conclusion of the course students having completed the regular work as outlined are given a certificate stating the studies pursued during the time spent in the college. No college credit toward a degree is given for work done in any of these courses.

Two-Year Agriculture

FIRST YEAR — *Term:*	*I*	*II*	*III*
Cereal Crops (Agron. 1)	3	..	..
Breeds and Judging of Livestock (A. H. 1)	3	..	..
Elementary Pomology (Hort. 1)	3	..	..
General Botany (Bot. 1)	3	..	..
General Chemistry (Gen. Chem. 1-2)	3	3	..
Composition and Rhetoric (Eng. 1-2)	3	3	..
Principles of Dairying (D. H. 1)	..	3	..
Landscape and Floriculture (Hort. 9)	..	3	..
Animal Pests (Zool. 1)	..	3	..
Farm Woodwork (Shop 1)	..	1	..
Public Speaking (Pub. Sp. 1)	..	1	..
Forage Crops (Agron. 2)	..	..	3
General Soils (Soils 1)	..	..	3
Feeds and Feeding of Live Stock (A. H. 2)	..	..	3
Home Vegetable Gardening (Hort. 5)	..	..	3
Sprays and Spraying (Ent. 2)	..	..	2
Forging and Pipe Fitting (Shop 2)	..	..	1
Vocational Publications (Eng. 3)	..	..	2
R. O. T. C. (M. I. 1)	2	2	2

SECOND YEAR — *Term:*	*I*	*II*	*III*
Breeding of Animals (A. H. 3)	3	..	..
Farm Management (F. M. 1)	3	..	..
Fertilizers (Soils 2)	3	..	..
Plant Diseases (Plt. Path. 1)	3	..	..
Farm Machinery (F. E. 1)	..	1	..
Grain Judging (Agron. 3)	..	2	..
Farm Accounts (A. E. 1)	..	3	..
Dairy Production and Barn Practice (D. H. 1)	..	2	..
Bacteriology (Bact. 1)	..	2	..
Farm Buildings (F. E. 6)	..	3	..
Gas Engines (F. E. 2)	..	..	3
Animal Diseases (V. M. 1)	..	..	3
Farm Poultry (P. H. 1)	..	..	3
Farm Forestry (For. 1)	..	..	2
Farm Drainage (F. E. 8)	..	..	3
Tractors and Trucks (F. E. 3)	2	2	2
R. O. T. C. (M. I. 2)			
Elect one or a portion of each:			
Advanced Agronomy (Agron. 3)	3	2	2
Special Animal Husbandry (A. H. 4-6)	3	3	3
Farm Dairying (D. H. 3)	3	..	..
Judging of Dairy Products (D. H. 4)	..	..	3
Commercial Fruit Growing (Hort. 2-3)	4	4	..
Small Fruits (Hort. 4)	..	..	3
Commercial Vegetable Gardening (Hort. 6-8)	4	4	4
Commercial Floriculture (Hort. 10-12)	3	3	3
Beekeeping (Zool. 3)	..	..	1

COURSES IN AGRICULTURE FOR SOLDIERS AND SAILORS

Students who are prepared to take up collegiate work fit directly into one of the four-year courses in Agriculture. Others who have but two years to spend in the University and are not prepared to enter college, may take the regular two-year agricultural course, which does not pre-suppose graduation from high school and which does not lead to a degree. There are still others who do not fit in any of the regularly planned courses, and for these the University has set up special unit courses, some of which are outlined on the following page:

*FIRST YEAR OF TWO-YEAR COURSE IN AGRICULTURE

For Special Federal Board Students

Students may elect any group or combination of groups according to their special interests.

Month	General Horticulture	Farm Management and Business	General Animal Husbandry	Poultry Husbandry	General Agronomy	Practical English and Comp. Two-Year English	Farm Equipment Given in Special Course (June, July and August)
September	Root Crops Fruit Harvest Fall Budding		Breeds and Judging I	Management	Corn		Farm Machinery
October	Varieties Fruit Picking Apples Packing Fruit		Breeds and Judging II	Feeding	Corn		Farm Machinery
November	Harvested Crops Storage, Burying Care of Farm Implements Christmas Flowers		Feeds and Feeding I	Fattening	Small Grains		Farm Machinery
December	Forcing Vegetables Floriculture Greenhouse Insects and Diseases	According to needs of students	Feeds and Feeding II	Exhibition Judging	Small Grains	English and Composition according to needs of students	Farm Machinery
January	Pruning		Feeds and Feeding III	Breeds and Breeding	Judging Corn		Gas Engines
February	Plant Propagation Insects and Diseases of Fruits		Principles of Breeding I	Incubation	Judging Small Grains		Gas Engines
March	Seedage Cuttings Hot Beds and Cold Frames Garden Planning Seed Testing		Principles of Breeding II	Brooding	General Display Judging Perennial Grasses		Gas Engines
April	Garden Preparation Transplanting Pollination		Swine Production	Marketing	Annual Grasses		Trucks and Tractors
May	Garden Planting Flower Beds Garden Insects		Beef Production	Culling	Legumes		Trucks and Tractors
June	Spraying, Diseases and Pests Cultivation June Budding		Sheep Production	Care of Young Stock	Legumes		Trucks and Tractors
July	Fruit Thinning Summer Spraying Summer Pruning Small Fruits		Dairy Management	Diseases			Farm Mechanics
August	Grapes, Berries Care of Gardens			Poultry House Construction			Farm Mechanics

*Second year of the two-year course in Agriculture organized according to the needs of the student.

*Special courses in Farm Mechanics, Gas Engines, Tractors and Trucks will be run in co-operation with the Federal Board authorities from the middle of June to the end of August, 1921 and 1922.

DESCRIPTION OF COURSES

AGRONOMY

AGRON. 101. *Cereal Crops*—Four credit hours: three lectures and one laboratory period. First term. Freshman year.

History, distribution, culture and improvement of cereal crops.

AGRON. 102. *Forage Crops*—Four credit hours: three lectures and one three-hour laboratory period. Third term. Sophomore year.

History, distribution, adaptation, culture, and uses of forage, pasture, cover and green manure crops. The laboratory periods are largely devoted to the identification and classification of forage plants and seeds, and to purity and viability tests of seeds.

AGRON. 103. *Grading Farm Crops*—Three credit hours: two lectures and one three-hour laboratory period. Second term. Junior year. Prerequisites, Agron. 101 and 102.

Market classifications and grades as recommended by the United States Bureau of Markets and practice in determining the grades.

AGRON. 104. *Grain Judging*—One credit hour: one three-hour laboratory period. Second term. Senior year. Prerequisite, Agron. 101.

Practice in judging the cereals for milling, seeding, and feeding purposes.

AGRON. 105. *Research and Thesis*—Six credit hours. To be arranged. Senior year.

Students are given a chance to do some investigational work either in the way of collecting information on some phase of agronomic work or working some problem in the laboratory, field, or greenhouse.

For Advanced Undergraduate and Graduate Students

AGRON. 106. *Genetics*—Four credit hours: three lectures and one three-hour laboratory period. Second term. Junior year. Prerequisites, Bot. 101 and Morph. and Myc. 101.

General course in genetics designed to prepare students for later courses in the breeding of crops in which they are specializing. (Kemp.)

AGRON. 107. *Cropping Systems and Methods*—Two credit hours: two lectures. Second term. Senior year. Prerequisites, Agron. 101-102, Soils 101-102.

Principles and factors influencing cropping systems in the United States; study of rotation experiments; theories of cropping methods; and practice in arranging type farming systems. (Metzger.)

AGRON. 109. *Crop Breeding*—Three credit hours: two lectures and one three-hour laboratory period. Third term. Senior year. Prerequisites, Agron. 101, 102, and 104, Bot. 101.

The principles of breeding as applied to field crops and detailed studies made of methods used in crop improvement work. (Kemp.)

AGRON. 108. *Methods in Crop Investigations*—Three credit hours: two lectures and one three-hour laboratory period. First term. Senior year. Prerequisites, Agron. 101-102.

Methods used by experiment stations in crop investigational work. The work of different stations on certain problems is classified with the view of the standardization of methods. Students are required to make reports on and criticize methods used by the different stations in attacking the problems studied. (Kemp.)

AGRON. 110-111. *Seminar*—One credit hour each term: one lecture. First and second terms. Senior year.

The seminar is devoted largely to reports by the students on current bulletins and scientific papers dealing with problems in agronomy. (Staff.)

For Graduate Students

AGRON. 201. *Biometry*—Amount of credit to be determined by work accomplished. Lectures and laboratory periods.

Statistical methods as applied to problems in Genetics and Plant Breeding. The methods used in the study of variations and correlations are discussed and the biometrical constants worked out by the class for certain assigned or selected data. (Kemp.)

AGRON. 202. *Crop Breeding*—Amount of credit to be determined by work accomplished. Lectures and laboratory periods.

The content of this course is similar to the undergraduate course in Crop Breeding, but will be adapted more to graduate students and more of a range will be allowed in choice of material to suit special cases. (Kemp.)

AGRON. 203. *Research*—Amount of credit to be determined by work accomplished.

With the approval of the head of the department the student will be allowed to work on any problem in agronomy or he will be given a list of suggested problems from which he may make a selection. (Staff.)

For Short-Course Students

AGRON. 1. *Cereal Crops*—Three credit hours: Two lectures and one three-hour laboratory period. First term. First year.

History, distribution, adaptations, uses, and culture of cereal crops, a larger part of the term being spent on corn and wheat.

AGRON. 2. *Forage Crops*—Three credit hours: two lectures and one three-hour laboratory period. Third term. First year.

History, distribution, adaptations, uses and culture of forage and cover crops adapted to Maryland conditions

AGRON 3. *Grain Judging*—One credit hour:one three-hour laboratory period. Second term. Second year. Prerequisite Agron 1.

Judging grains from the standpoint of the grower, the feeder and the miller.

AGRON. 4. *Advanced Agronomy*—Three credit hours: two lectures and one three-hour laboratory period each term. Second year.

Short course students specializing in agronomy are given special work in judging and grading grains, crop improvement and various other phases of crop production. Students are allowed to elect subjects in other departments for part of the time.

ANIMAL HUSBANDRY

A. H. 101. *Animal Husbandry*—Four credit hours: three lectures and one laboratory period. Second term. Freshman year.

Live stock in relation to farm practices; types and breeds of farm animals.

A. H. 102a-102b. *Feeds and Feeding*—Three credit hours each term: two lectures and one laboratory period. First and second terms. Sophomore year.

Elements of nutrition; source, characteristics, and adaptability of the various food stuffs to the several classes of farm live stock. Feeding standards; the calculation and compounding of rations.

A. H. 103. *Management of Dairy Young Stock*—Three credit hours: two lectures and one laboratory period. Third term. Junior year.

The care, feeding and management of dairy young stock, breeding practices, feeding for advanced registry, and dairy cattle judging.

A. H. 104. *Principles of Breeding*—Four credit hours: three lectures and one laboratory period. Third term. Junior year.

This course covers the practical aspects of animal breeding, including heredity, variation, selection, growth, development, systems of breeding and pedigree study.

A. H. 105. *Swine Production*—Three credit hours: two lectures and one laboratory period. First term. Junior year.

Types and breeds of swine. Care, feeding, breeding, management, economics of swine husbandry and judging.

A. H. 106. *Meat and Meat Products*—Three credit hours: two lectures and one laboratory period. Second term. Junior year.

The slaughtering of farm live stock, and the production, preparation and handling of meat and meat products.

A. H. 107. *Beef Production*—Three credit hours: two lectures and one laboratory period. Second term. Junior year.

Beef and dual purpose breeds. The care, feeding, breeding and management of beef herds; fattening; and the economics of the beef industry.

A. H. 108. *Sheep Production*—Three credit hours: two lectures and one laboratory period. Third term. Senior year.

Breeds, their history, characteristics and adaptability. Care, feeding, breeding, and management. Grades of wool. Judging and scoring.

A. H. 109. *Horse and Mule Production*—Three credit hours: two lectures and one laboratory period. First term. Senior year.

Breeds, their history, characteristics and adaptability. Care, feeding, breeding, breaking and training, judging.

A. H. 110-111. *Advanced Judging*—Two credit hours each term: one lecture and one laboratory period. Second and third terms. Junior or Senior years. Prerequisites, A. H. 103, 105, 107.

First Term—Competitive judging of beef cattle, sheep and swine. Second term. Competitive judging of dairy cattle. Various trips to stock farms throughout the State will be made. Such judging teams as may be chosen to represent the University will be selected from among those taking this course.

A. H. 112. *Advanced Breed Study*—Three credit hours: two lectures and one laboratory period. Third term. Senior year. Prerequisites, A. H. 103, 105, 107, 108.

Special consideration of the history, development, and distribution of the more important breeds of live stock; important families and individuals; assigned reading and pedigree work.

A. H. 113. *Markets and Marketing*—Three credit hours: two lectures and one laboratory period. First term. Senior year. Prerequisites, A. H. 106, 107, 108, 109.

History, development, organization and status of the meat, wool, and horse industries. The packing industry and its by-products. Market classes and grades of live stock. Markets and market reports.

A. H. 114. *Seminar*—One credit hour: one lecture. Third term. Senior or graduate students only.

Problems, readings and discussions on subjects relating to animal husbandry.

A. H. 115-117. *Research and Thesis*—Two credit hours each term. Senior year.

Original investigations in problems in animal husbandry, the results of which research are to be presented in the form of a thesis.

Advanced Undergraduate and Graduate Courses

A. H. 118. *Animal Genetics and Statistical Methods*—Four credit hours: three lectures and one laboratory period. First term. Senior year or graduate. Prerequisites, A. H. 104.

An introduction to genetics and statistical methods as applying more especially to animal breeding. (Meade.)

A. H. 119. *Nutrition*—Three credit hours: three lectures. Third term. Seniors or Graduates. Prerequisite, A. H. 102.

Composition of the animal body, digestion, assimilation, metabolism, protein and energy requirements. Method of investigation and studies in the utilization of food nutrients. (Meade.)

For Short-Course Students

A. H. 1. *Breeds and Judging*—Three credit hours: two lectures and one laboratory period. First term. First year.

Live stock in relation to successful farm practices, types and breeds of farm animals with special reference to the needs of the practical farmer.

A. H. 2. *Feeds and Feeding*—Three credit hours: two lectures and one laboratory period. Third term. First year.

A study of the source, composition, characteristics and adaptability of the various food stuffs, feeding standards and the calculation of rations.

A. H. 3. *Breeding of Animals*—Three credit hours: two lectures and one laboratory period. First term. Second year.

A course covering the practical aspects of animal breeding, including heredity, variation, selection, systems of breeding and pedigree study.

A. H. 4-6. *Special Animal Husbandry*—Three credit hours: two lectures and one laboratory period. Throughout the second year. Each term of work is complete in itself and may be elected without regard to the work of the term preceding it or of the term following.

Swine Production—First term. Types and breeds of swine. Care, feeding, breeding, management, economics of swine husbandry and judging.

Beef Production—Second term. Subject matter of course same as for "Swine Production."

Sheep Production—Third term. Subject matter of course same as for "Swine Production."

A. H. 7. *Management of Dairy Young Stock*—Three credit hours: two lectures and one laboratory period. Third term. Second year.

The care, feeding and management of dairy young stock, breeding practices, feeding for advanced registry, and dairy cattle judging.

General Animal Husbandry

Seminar—A forum for the discussion of subjects relating to animal industry. Open to juniors, seniors and graduate students.

Research and Thesis—The work will be arranged with each student individually. He may select some topic or problem in which he is interested and which will require independent investigation.

Animal Pathology and Veterinary Medicine

During 1922-23 only the first two years of the combined six-year course in Agriculture and Veterinary Medicine are given.

For Students in Agriculture

V. M. 101. *Anatomy and Physiology*—Three credit hours: three lectures. First term. Junior year.

Structure of the animal body; abnormal as contrasted with the normal; the inter-relationship between the various organs and parts both as to structure and function.

V. M. 102. *Animal Diseases*—Four credit hours: three lectures and one laboratory period. Third term. Senior year.

Diseases of domestic animals, infectious and non-infectious. Early recognition of disease; hygiene, sanitation, and prevention; first aid.

For Short-Course Students

V. M. 1. *Animal Diseases*—Three credit hours: two lectures and one laboratory period. Second term. Second year.

Briefer course on the diseases of domestic animals; methods of recognizing disease in its early stages; relation of care and sanitation to disease.

Bacteriology and Sanitation

Bact. 101-103. *General Bacteriology*—Three credit hours each term; one lecture and two laboratory periods. Junior year.

A brief history of bacteriology; microscopy; bacteria and their relation to nature; morphology, classification, identification of species and the different methods of sterilization and disinfection; preparation of culture media; isolation and cultivation of aerobes and anaerobes; examination of cultures; microscopic examination of bacteria; stains with their composition, classification and use; vital activities of bacteria; their relation to disease; use of experimental animals; bacteria in water, milk and soils; cultural characters of representative organisms from the following genera: micrococcus, streptococcus, bacterium, bacillus, pseudomonas, streptothrix, protozoa, filtrable viruses and immunity.

Bact. 103-A. *Special for Home Economics Students only*—Three credit hours: third term. One lecture and two laboratory periods. Junior year.

The more important bacteria, yeasts and fungi ordinarily encountered in the field of domestic economy. Preservation of foods. Sanitation.

For Advanced Undergraduates or Graduates

Bact. 104-106. *Dairy Bacteriology*—Three credit hours each term: one lecture and two laboratory periods. Senior year. Prerequisites, Bact. 101-103.

Historical sketch; relation of bacteria to dairy products; preparation of media; plating by the dilution method; sources of contamination, including stable atmosphere, udder, exterior of cows and attendants; kinds of utensils and their sterilization; kinds of bacteria in milk and their development; direct microscopic examination; sedimentation test and centrifugalization; fresh and old milk, baby and special milks; market milk; graded milk; certified milk; sour milk; whey; cream; butter, cheese; condensed milk, powdered milk and milk starters; pasteurization by flash and slow method; changes in milk due to bacteria and milk carriers of disease. (Poelma.)

Bact. 107-109. *Advanced Bacteriology*—Two to three credit hours each term: two to three laboratory periods. Senior year. Prerequisites, Bact. 101-103.

This course is intended primarily to give the student a chance to develop his own initiative. He will be allowed to decide upon his project and work it out as much as possible in his own way under proper supervision. In this manner he will be able to apply his knowledge of bacteriology to a given problem. He will also get to know something of the methods of research and will receive a valuable training in obtaining careful and accurate data. (Pickens.)

Bact. 110-112. *Thesis*—Two credit hours each term: senior year. Optional.

The investigation of a given project, the results of which are to be presented in the form of a thesis and submitted for credit toward graduation. (Pickens.)

Bact. 113-115. *Seminar*—One credit hour each term: senior year. Required of seniors taking Bact. 107-109 and all graduate students.

The work will consist of reports on individual projects and on recent scientific literature.

For Graduate Students Only

Bact. 201-203. *Research Bacteriology*—Three credit hours each term: three laboratory periods by assignment. Prerequisites, Bact. 101-103 and in certain cases 104-106 and 107-109, depending upon the project. (Pickens.)

For Short-Course Students

Bact. 1. *Agricultural Bacteriology*—Two credit hours: two lectures. Second term. Second year.

An elementary course touching upon the following topics: the general characters of micro-organisms; fermentation; putrefaction and decay; nature's food supply; the carbon cycle; decomposition of nitrogenous compounds; nitrification and denitrification; the manure heap and sewage; reclamation of lost nitrogen; bacteria and soil minerals; bacteria in water and milk; control of milk supply; bacteria in butter and cheese making; alcohol, vinegar, sour kraut, tobacco, silage and flax; preservation of food products; resistance against parasitic bacteria; tuberculosis and other germ diseases and parasitic diseases of plants.

Dairy Husbandry

D. H. 101. *Principles of Dairying*—Four credit hours: three lectures and one laboratory period. Third term. Sophomore year.

Origin, history, development and characteristics of the dairy breeds; relationship of Dairy Husbandry to general agriculture; extent of the dairy business and value of products; milk, its secretion, character and composition.

D. H. 102. *Advanced Registry and Association Work*—Two credit hours: one lecture and one laboratory period. First term. Sophomore year.

Requirements for advanced registry; the management of long and short time tests; breed association rules; general work of the supervisor; care and testing of samples; cow testing associations; bull associations. Paid supervisors at $3.00 per day are selected for work over week-ends from those taking this course.

D. H. 103. *Judging Dairy Products*—Two credit hours: one lecture and one laboratory period. Second term. Sophomore year.

Competitive judging of milk, butter and cheese. National authorities will address the class and trips will be taken to butter, cheese and milk markets for the purpose of familiarizing the students with the commercial quality of these products. Such teams as may be chosen to represent the University will be selected from those electing this course.

D. H. 104. *Dairy Production and Barn Practice*—Four credit hours: three lectures and one laboratory period. First term. Junior year.

The care, feeding and management of dairy cattle, including selection of feeds; feeding standards; systems of herd feeding; silage, soiling crops and pasture; selection, care and feeding the sire; dairy herd development and management; method of keeping and forms for herd records; dairy barn arrangement and equipment; dairy cost accounts and barn practices which influence quantity and quality in milk. Prerequisite D. H. 101.

Courses for Advanced Undergraduates and Graduates

D. H. 105. *Farm Dairying*—Three credit hours: two lectures and one laboratory period. Second term. Junior year.

How bacteria and dirt get into milk; how they may be kept out; equipping the stable and milk house; surface coolers and precooling; milk cooling tanks; sterilizers for utensils; washing and sterilizating utensils; dairy farm score cards; composition of milk, butter and cheese and methods of testing. Prerequisites D. H. 101 and 104.

D. H. 106-107. *Commercial Dairying*—Three credit hours, each term: one lecture and two laboratory periods. Second and third terms. Junior or Senior years.

Methods of testing and of manufacturing of dairy products. Dairy machinery. Theory and practice of cream separation, pasteurization and processing of milk and cream: Butter, ice cream and cottage cheese making. Prerequisites D. H. 104 and 106.

D. H. 108. *Market Milk*—Three credit hours: two lectures and one laboratory period. First term. Senior year.

A study of market milk conditions, requirements of city milk trade; the production of milk; pasteurization of milk; milk and its relation to the public health; the food value of milk; methods of handling market milk and market cream for direct consumption; the transportation of milk; Babcock testing of milk and milk products. In this course visits will be made to dairies and to milk plants. Prerequisites D. H. 104 and 105.

D. H. 109. *Advanced Course in Milk Testing*—Three credit hours: one lecture and two laboratory periods. Second term. Senior year.

This course includes the determination of moisture and dry matter in milk and dairy products; various tests for fat and casein; testing of butter and oleomargarine; adulterations and preservatives. Prerequisite D. H. 107.

D. H. 110. *Seminar*—One credit: one lecture. Second term.

The seminar is devoted largely to reports by students on current bulletins and scientific papers in dairy production and market milk problems.

D. H. 111-113. *Thesis*—Six credit hours. Year to be arranged.

Students are given opportunities to conduct investigational work, either in collecting information or original research in Dairy Production and Market Milk.

D. H. 114. *City Milk Supply*—Two credit hours: two lectures. First term.

Securing a milk supply for city consumers; methods of buying from producers; the transportation of milk; milk contractors; systems of handling milk in the city milk plants; the sterilization of utensils; systems of delivery to consumers.

D. H. 115. *Dairy Farm and City Milk Inspection*—Two credit hours: two lectures. Second term.

Early attempts at control and the development of milk inspection; systems of dairy inspection; systems of milk plant inspection; dairy farm score cards; dairy plant score cards; relation of milk to public health; grading milk; milk standards; milk and cream regulations; methods of appointment and duties of dairy and milk inspectors; general improvement and control of milk supplies of cities and towns.

Graduates

D. H. 201. *Dairy Production*—Four credit hours: First term.

The care, feeding and management of dairy cattle, including feeding standards and selection of feeds; systems of herd feeding; silage and silos; soiling systems and pastures; the selection, care and feeding of the sire; dairy herd development and management; cost accounts and practices which influence quantity and quality in milk. (Gamble and staff.)

D. H. 202. *Research*—Nine credit hours. Year to be arranged. Graduates.

With the approval of the head of the department, students will be allowed to work on any problem in dairy production or market milk they may choose, or be given a list of problems from which to select a research project.

Insofar as schedules permit, students will be encouraged to visit the U. S. Dairy Division Laboratories and become acquainted with the dairy research problems in process and the methods of attack. This acquaints the student with the broad phases of research in dairy production and market milk. (Gamble and staff.)

For Short-Course Students

D. H. 1. *Principles of Dairying*—Four credit hours: three lectures and one laboratory period. First term. First year.

Origin, history, development and characteristics of the dairy breeds; relationship of Dairy Husbandry to general agriculture; extent of the dairy business and value of products; milk, its secretion, character and composition.

D. H. 2. *Advanced Registry and Association Work*—Two credit hours: one lecture and one laboratory period. Second term. First year.

Requirements for advanced registry; the management of long and short time tests; breeds association rules; general work of the supervisor; care and testing of samples; cow testing associations; bull associations. Paid supervisors at $3.00 per day are selected for work over week-ends from those taking this course. Prerequisites Organic Chemistry 112 and 113.

D. H. 3. *Dairy Production and Barn Practice*—Four credit hours: three lectures and one laboratory period. First term. Second year.

The care, feeding and management of dairy cattle, including selection of feeds; feeding standards; systems of herd feeding; silage soiling crops and pasture; selection, care and feeding the sire; dairy herd development and management; method of keeping and forms for herd records; dairy barn arrangement and equipment; dairy cost accounts and barn practices which influence quantity and quality in milk. Prerequisite D. H. 1.

D. H. 4. *Farm Dairying*—Three credit hours: two lectures and one laboratory period. Second term. Second year.

How bacteria and dirt get into milk; how they may be kept out; equipping the stable and milk house; surface coolers and precooling; milk cooling tanks; sterilizers for utensils; washing and sterilizing utensils; dairy farm score cards; composition of milk, butter and cheese and methods of testing. Prerequisites D. H. 101 and 102.

D. H. 5. *Judging Dairy Products*—Two credit hours: one lecture and one laboratory period. Third term. Second year.

Competitive judging of milk, butter and cheese. National authorities will address the class and trips will be taken to butter, cheese and milk markets for the purpose of familiarizing the students with the commercial quality of these products. Such teams as may be chosen to represent the University will be selected from those electing this course.

Entomology

Ent. 101. *General Entomology*—Three credit hours: two lectures and one laboratory period. Third term. Sophomore year. Prerequisite, Zool. 101-102.

General principles of structural and systematic entomology. Lectures, recitations, laboratory work and field excursions. A collection of insects is required.

Ent. 102. *Insect Morphology*—Two credit hours: two laboratory periods. First term. Junior year. Prerequisite, Zool. 101-102.

A course in morphology designed to prepare students for work in economic entomology.

Ent. 103-104. *Economic Entomology*—Four credit hours each term: two lectures and two laboratory periods. Second and third terms. Junior year. Prerequisite, Ent. 101.

The theory and practice of insect control; their dependence upon insect morphology and biology. The discussion of economic insects.

Ent. 105-107. *Economic Entomology*—Five credit hours each term: three lecture hours and two laboratory periods. The Senior year. Prerequisite, Ent. 102-104.

Problems in applied entomology, including life history, ecology, distribution, parasitism and control.

Ent. 108. *Systematic Entomology*—Two credit hours: two laboratory periods. First term. Senior year. Prerequisite. Ent. 102.

The student selects some group in which he is particularly interested and makes a detailed study of it. The course requires considerable field work and is supplemented by laboratory periods and frequent conferences.

Ent. 109-111. *Thesis*—Two credit hours each term: laboratory periods to be arranged. The Senior year.

The intensive investigation of some zoological subject, the results of which are incorporated in a paper which is submitted as part requirement for graduation.

Ent. 112. *Insecticides and Their Application*—Two credit hours: one lecture and one laboratory period. Second term. Junior year.

The principles of insecticides, their chemistry, preparation and application; construction, care and use of spray and dusting machinery; fumigation, methods and apparatus in mechanical control.

Ent. 113. *Medical Entomology*—Three credit hours: three lectures. First term. Junior year. Prerequisite, Zool. 101-102.

The relation of animals to disease, directly and as vectors of pathogenic organisms; the control of pests of man.

Ent. 114. *Scientific Delineation and Preparation*—One credit hour each term: one laboratory period. First and second terms. Senior year.

Photography, photomicrography, drawing freehand and with camera lucida, lantern-slide making, optical projection, preparation of exhibit and museum material.

Ent. 115. *Horticultural Entomology*—Three credit hours: two lectures and one laboratory period. Third term. Junior year. Prerequisite, Ent. 101.

Lectures, laboratory and field work on the morphology, biology and control of insect pests of horticultural crops.

For Graduate Students

Ent. 201. *Entomological Problems*—Maximum credit 5 hours per term. Studies of minor problems in morphology, taxonomy and applied ento-

mology with particular reference to preparation for individual research. (Cory.)

ENT. 202. *Research in Entomology*—Maximum credit 15 to 20 hours upon completion of the thesis.

Advanced students having sufficient preparation may, with the approval of the head of the Department, undertake supervised research in morphology, taxonomy or biology and control of insects. Frequently, the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A report, suitable for publication, must be submitted at the close of the studies and the time and place of its publication will be determined by the professor in charge of the work. (Cory.)

ENT. 203. *Advanced Economic Entomology*—One credit hour; one lecture. Second term.

Lectures discussing the latest theories and practices in applied entomology. (Cory.)

For Short-Course Students

ENT. 1. *Sprays and Spraying*—One lecture and three hours laboratory period. Third term. First year.

Preparation and application of insecticides, together with a consideration of other methods of control.

ENT. 2. *Beekeeping*—Two credit hours: one lecture and one laboratory period. Second term. One credit hour: one laboratory period. Third term. Students who are qualified may be given college credit for the work.

A practical course for students who expect to keep bees for home or commercial purposes.

FARM EQUIPMENT

The Department of Farm Equipment is organized to offer students of agriculture a working knowledge of those branches of agriculture which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery, farm buildings, and farm drainage.

The modern tendency in farming is to replace hand labor, requiring the use of many men, by large machines which do the work of many men yet require only one man for their operation. In many cases horses are being replaced by tractors to supply the motive force for these machines. Trucks and automobiles are used on many farms. It is highly advisable that the student of any branch of agriculture have a working knowledge of the construction and adjustments of these machines.

About one-sixth of the total value of farms is tied up in the buildings. The study of the design of the various buildings, from the standpoint of convenience, economy and appearance, is, therefore, important.

The study of drainage includes the principles of tile drainage, the laying

out and construction of tile drain systems, the use of open ditches, and a study of the Maryland drainage laws.

Description of Courses

F. E. 101. *Farm Machinery*—Three credit hours each term: two lectures and one laboratory period; first or third terms. Junior or Senior year.

A study of the design and adjustments of modern horse and tractor drawn machinery. Laboratory work consists of a detailed study of actual machinery, calibration tests and practice in adjusting.

F. E. 102. *Gas Engines*—Three credit hours: two lectures and one laboratory period. Second term. Junior or Senior Year.

The construction and operation of the various types of internal combustion motors encountered in farm practice.

F. E. 103. *Tractors and Trucks*—Three credit hours: two lectures and one laboratory period. Third term. Junior year. Prerequisite: F. E. 102.

A continuation of F. E 102, with especial emphasis on the four cylinder motor. Includes special features of tractor practice. Particular attention given to study of ignition. Laboratory work includes a detailed study of carburetion and ignition systems, engine operation and adjusting, trouble shooting, etc.

F. E. 104. *Advanced Gas Engines*—Two credit hours: one lecture and one laboratory period. First term. Senior year. Prerequisite F. E. 102 and 103.

An advanced study of the design and operation of the gasoline motor.

F. E. 106. *Farm Buildings*—Two credit hours: two lectures. Second term. Junior year.

A study of all types of farm structures, also of farm heating, lighting, water supply, ventilation, and sanitation systems.

F. E. 108. *Farm Drainage*—Three credit hours: two lectures, one laboratory period. Third term.

A study of farm drainage systems, for the student who has not studied college mathematics or surveying. Includes the theory of tile drains, the depth and spacing of laterals, calculation of grades, and methods of construction. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

For Short-Course Students

The courses for Short-Course students in Farm Engineering cover substantially the same ground as the corresponding courses for the college students, with due allowance made for the Short-Course students' lack of theoretical instruction.

F. E. 1. *Farm Machinery*—Two lectures, one laboratory period. First term. Second year.

A study of the operation and adjustments of modern farm machinery.

F. E. 2. *Gas Engines*—Two lectures, one laboratory period. Second term. Second year.

A study of gas engine design and construction.

F. E. 3. *Tractors and Trucks*—Two lectures, one laboratory period. Third term. Second year. Prerequisite: F. E. 2.

A continuation of F E. 2, with especial attention to four cylinder motors.

F. E. 6. *Farm Buildings*—Two lecture periods. Second term. Second year.

A study of the various types of farm buildings, and of water, heating, and lighting systems.

F. E. 8. *Farm Drainage*—Two lectures, one laboratory period. Third term. Second year.

A study of the principles governing the design of farm drainage systems, and the construction of the same.

Farm Management

F. M. 101-102. *Farm Management*—Three credit hours each term: three lectures. First and second terms. Senior year.

The business of farming from the standpoint of the individual farmer. This course aims to connect the principles and practice which the student has acquired in the several technical courses and to apply them to the development of a successful farm business.

For Short-Course Students

F. M. 1. *Farm Management*—Three credit hours: two lectures and one laboratory period. First term. Second year. Prequisite A. E. 103.

A course parallel with F. M. 101-102, arranged for the students in the short agricultural courses.

Agricultural Economics

A. E. 101. *Agricultural Economics*—Three credit hours. Third term. Junior year. Prerequisite, Econ. 101-102.

The economic adaptations and adjustments necessary on the part of the agriculturist to meet the changing economic conditions. Population trend, land tenure, farm incomes, farm labor, agricultural credit, and price movements will receive special consideration.

A. E. 102. *Markets and the Marketing*—Three credit hours. First term. Senior year. Prerequisite, Econ. 101-102.

An analysis of the present system of transporting, storing and distributing farm products and a basis for intelligent direction of effort in increasing the efficiency of marketing methods and co-operative marketing.

A. E. 103. *Farm Accounting*—Four credit hours: three lectures and one laboratory period. Third term. Junior year.

The principles underlying farm accounting, emphasizing cost accounting and analysis of farm business.

For Short-Course Students

A. E. 1. *Farm Accounting*—Three lectures. Second term. Second year.

A course parallel with A. E. 103. For students in the short agricultural courses.

Rural Organization

R. O. 101-103. *Elements of Community Study*—Three credit hours each term. The Senior year.

A course dealing with the fundamental principles of community development.

R. O. 104. *Principles of Rural Organization*—Three credit hours. Third term. Junior year.

Historical and comparative development of farmers' co-operative organizations, stressing particularly present tendencies.

Forestry

The course in Farm Forestry aims to give the student in agriculture sufficient instruction and practice work to enable him to handle intelligently and scientifically the farm woodlands. Such a course should be required of all students fitting themselves for farm management and be given preferably in the spring term (on account of favorable weather for field work) during the Junior or Senior year for four-year men and during the Second year for two-year agricultural men. At the present time Forestry is not offered as a major course, but is used to supplement the content of the other courses.

Description of Courses

For. 101. *Farm Forestry*—Three credit hours: two lectures and one laboratory period. Third term. Senior year. Prerequisite, Bot. 101.

A study of forest botany, wood management, measurements, fire protection, nursery practice, tree planting, valuation and utilization of forest crops. The work is conducted by means of lectures and field work.

For Short-Course Students

For. 1. *Farm Forestry*—Three credit hours: two lectures and one laboratory period. Third term. Second year.

The content of this course is similar to that of For. 101, but is adapted to the development and needs of students in the short-course work.

HORTICULTURE

Pomology

Description of Courses

Hort. 101. *Elementary Pomology*—Four credit hours: three lectures and one laboratory period. First term. Sophomore year.

A general course in Pomology. The proper location and site for an orchard are discussed. Varieties, planting plans, inter-crops, spraying, cultural methods, fertilizing methods, thinning, picking, packing and marketing are also given consideration. The subjects are discussed for apples, peaches, pears, plums, cherries and quinces. The principles of plant propagation as applied to pomology are discussed.

Hort. 102-103. *Commercial Fruit Growing*—Three credit hours: two lectures and one laboratory period. First term. Three credit hours: two lectures and one laboratory period. Second term. Senior year. Prerequisite, Hort. 101.

The proper management of commercial orchards in Maryland. Advanced work is taken up on the subjects of orchard culture, orchard fertilization, picking, packing, marketing and storing of fruits, orchard by-products, orchard heating and orchard economics. Designed for undergraduate or graduate sudents.

Hort. 104. *Systematic Pomology*—Three credit hours: two lectures and one laboratory period. First term. Junior year. Prerequisite, Hort. 101.

The history, botany and classification of fruits and their adaptation to Maryland conditions. Exercises are given in describing and identifying the leading commercial varieties of fruits. Students are required to help set up the College fruit show each year. Designed for undergraduate or graduate students.

Hort. 105. *Advanced Practical Pomology*—One credit hour. First term. Senior year. Prerequisites, Hort. 102-103 and 104.

A trip occuping one week's time will be made through the principal fruit regions of eastern West Virginia, Maryland and Pennsylvania. A visit to the fruit markets of several large cities will be made. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

Hort. 106. *Small Fruit Culture*—Three credit hours: two lectures and one laboratory period. Third term. Junior year.

The care and management of small fruit plantations. Varieties and their adaptation to Maryland soils and climate, packing, marketing, and a study of the experimental plots and varieties on the station grounds. The following fruits are discussed: the grape, strawberry, blackberry, black cap raspberry, red raspberry, currant, gooseberry, dewberry and loganberry.

Hort. 107. *Economic Fruits of the World*—Three credit hours: three lectures. Second term. Senior year. Prerequisites, Hort. 102-103 and 104.

A study is made of the botanical, ecological and physiological characteristics of all species of fruit-bearing plants of economic importance, such as the date, pineapple, fig, olive, banana, nut bearing trees, citrus fruits, newly introduced fruits and the like, with special reference to their cultural requirements in certain parts of the United States and the insular possessions. All fruits are discussed in this course which have not been discussed in a previous course. Open to undergraduate or graduate students.

Hort. 108. *Fruit and Vegetable Judging*—Two credit hours: two laboratory periods. First term. Junior year. Prerequisites, Hort. 101 and 111.

A course designed to train men for fruit judging teams and practical judging. Students are required to know at least one hundred varieties of fruit, and are given practice in judging single plates, largest and best collections, boxes, barrels and commercial exhibits of fruits and vegetables. Students are required to help set up the College Horticultural show each year.

Hort. 109. *Advanced Fruit Judging*—One credit hour: one laboratory period. First term. Senior year. Prerequisite, Hort. 108.

Vegetable Gardening

Hort. 111. *Elementary Vegetable Gardening*—Four credit hours: three lectures, one laboratory. Third term. Freshman year.

A study of fundamental principles underlying all garden practices. Each student is given a small garden to plan, plant, cultivate, spray, fertilize, harvest, etc.

Hort. 112. *Tuber and Root Crops*—Three credit hours: two lectures, and one laboratory period. First term. Senior year Prerequisite, Hort. 111. Open to seniors and graduates.

A study of white potatoes and sweet potatoes, considering seed varieties, propagation, soils, fertilizers, planting, cultivation, spraying, harvesting, storing and marketing.

Hort. 113-114. *Commercial Vegetable Gardening*—Three credit hours: First and second terms. Junior year. Two lectures and one laboratory period. Prerequisite, Hort. 111.

A study of methods used in commercial vegetable production. Each individual crop is discussed in detail. Trips are made to large commercial gardens, various markets and other places of interest.

Hort. 116. *Systematic Olericulture*—Three credit hours: one lecture and two laboratory periods. First term. Senior year. Prerequisites, Hort. 112 and 113-114. Open to seniors and graduates.

A study of the classification and nomenclature of vegetables. Description of varieties, and adaptation of varieties to different environmental conditions.

HORT. 117. *Advanced Vegetable Gardening*—One credit hour: Third term. Senior year. Prerequisites, Hort. 112, 113-14 and 116.

A trip of one week is made to the commercial trucking sections of Maryland, Delaware, New Jersey and Pennsylvania. A study of the markets in several large cities is included in this trip. Students are required to hand in a detailed report of the trip. Such a trip should not exceed thirty dollars per student. The time will be arranged each year with each class.

HORT. 118. *Vegetable Forcing*—Three credit hours: two lectures and one laboratory period. Prerequisite, Hort. 111. Third term. Junior year.

All vegetables used for forcing are considered. Laboratory work in sterilzation and preparation of soils, cultivation, regulation of temperature, and humidity, watering, training, pruning, pollination and harvesting.

FLORICULTURE

HORT. 121. *General Floriculture*—Three credit hours: two lectures and one laboratory period. First term. Sophomore year.

The management of greenhouses: the production and marketing of florists crops; retail methods; plants for house and garden.

General course for students desiring knowledge of floriculture but not wishing to specialize in floriculture. Not required of floricultural students.

HORT. 122. *Elementary Floriculture*—Three credit hours: two lectures and one laboratory period. Second term. Sophomore year.

The floricultural industry; evolution and development; present status; the trade and its various divisions; florists' problems.

HORT. 123-124. *Greenhouse Management*—Three credit hours: two lectures and one laboratory period. First term. Two credit hours: one lecture and one laboratory period. Second term. Junior year.

HORT. 125. *Floricultural Practice*—One credit hour: one laboratory period. Third term. Junior year. Prerequisite, Hort. 122-123.

Practical experience in the various greenhouse operations of the spring season.

HORT. 126. *Greenhouse Construction*—Two credit hours: one lecture and one laboratory period. Second term. Junior year. Given 1923-1924.

The various types of houses, their location, arrangement, construction, and cost; principles and methods of heating; preparation of plans and specifications for commercial and private ranges. This course is given every other year.

HORT. 127-128. *Commercial Floriculture*—Three credit hours each term: two lectures and one laboratory period. First and second terms. Senior year. Prerequisite, Hort. 124.

Cultural methods of florists' bench crops and potted plants: the marketing of cut flowers; the retail store; a study of floral decoration.

HORT. 129. *Garden Flowers*—Three credit hours: two lectures and one laboratory period. Third term. Junior year. Given 1923-1924.

Plants for garden use; the various species of annuals, herbaceous perennials, bulbs, bedding plants, and roses and their cultural requirements. This course is given every other year.

LANDSCAPE GARDENING

HORT. 131. *General Landscape Gardening*—Three credit hours: two lectures and one laboratory period. Third term. Sophomore year.

The theory and general principles of landscape gardening and their application to private and public areas. Special consideration is given to the improvement and beautification of the home grounds, farmsteads, and small suburban properties. Adapted to students not intending to specialize in landscape, but who wish some theoretical and practical knowledge of the subject. Open to all students.

HORT. 132. *Plant Materials*—Two credit hours: one lecture and one laboratory period. First term. Junior year. Given 1922-23.

A field and laboratory study of trees, shrubs and vines used in ornamental planting. Given every other year.

HORT 133. *Plant Materials*—Two credit hours: one lecture and one laboratory period. Third term. Prerequisite, Hort. 132. Given 1922-1923.

A continuation of Hort. 132 to make the student familiar with woody plants in spring and summer. Given every other year.

HORT. 134. *Elements of Landscape Design*—Three credit hours: one lecture and two laboratory periods. Second term. Junior year.

A consideration of the principles of landscape design; surveys, mapping and field work.

HORT. 135-136. *Landscape Design*—Three credit hours: one lecture and two laboratory periods. First term. Three credit hours; three laboratory periods. Second term. Senior year. Prerequisites, Hort. 132 and 134.

The design of private grounds, gardens and of architectural details used in landscape; planting plans; analytical study of plans of practicing landscape architects; field observation of landscape developments.

HORT. 137. *Landscape Practice*—Three credit hours: one lecture and two laboratory periods. Third term. Senior year. Prerequisites, Hort. 135-136.

Tracing and drafting of plans; construction methods; field practice.

HORT. 138. *History of Landscape Gardening*—One credit hour: one lecture. Second term. Junior year. Given 1922-1923.

Evolution and devolpment of landscape gardening; the different styles and a particular consideration of Italian, English, and American gardens. Given every other year.

HORT. 139. *Civic Art*—Two credit hours: one lecture and one laboratory period. First term. Senior year. Prerequisites, Hort. 134. Given 1923-1924.

Principles of city planning and their application to village and rural

improvement, including problems in design of civic center, parks, school grounds, and other public and semi-public areas. Given every other year.

General Horticultural Courses

Hort. 142. *Horticultural Breeding Practice*—One credit hour: one laboratory period. Third term, Senior year. Prerequisite, Genetics, Plant Phys. 101-102.

Practice in plant breeding, including pollination, hybridization, selection, note taking, and the general application of the theories of heredity and selection to practice are taken up in this course.

Hort. 143-145. *Horticultural Research and Thesis*—Two, three or four credit hours each term. Hours to be arranged.

This course is required of Seniors. Advanced students in any of the four divisions of horticulture may select some special problem for individual investigation. This may be either the summarizing of all the available knowledge on a particular problem or the investigation of some new problem. Where original investigation is carried on, students should in most cases start the work during the junior year. The results of the research work are to be presented in the form of a thesis and filed in the horticultural library.

Hort. 146-148. *Horticultural Seminar*—One credit hour each term. Hours to be arranged.

This course is required of seniors; juniors are permitted to attend. In this course papers are read by members of the class upon subjects pertaining to their research or thesis work, or upon special problems assigned them. Discussions of special topics are given from time to time by members of the departmental staff.

Courses Intended Primarily for Graduates

Hort. 201. *Experimental Pomology*—Three credit hours. Second term. Lectures, three hours.

A systematic study of the sources of knowledge and opinion as to practices in Pomology; methods of difficulties in experimental work in Pomology and results of experiments that have been or are being conducted in all experiment stations in this and other countries. A limited number of seniors will be allowed to take this course with the approval of the head of the department.

Hort. 202. *Experimental Vegetable Gardening*—Two credit hours. Lectures, two hours. Second term.

A systematic study of the sources of knowledge and opinion as to practices in Vegetable Gardening; methods and difficulties in experimental work in Vegetable Gardening and results of experiments that have been or are being conducted in all experiment stations in this and other countries. A limited number of seniors will be permitted to take this course with the approval of the head of the department.

Hort. 203. *Experimental Floriculture*—Two credit hours. Lectures, two hours. Second term.

A systematic study of the sources of knowledge and opinions as to practices in Floriculture are discussed in this course. The results of all experimental work in Floriculture which have been or are being conducted will be thoroughly discussed. A limited number of seniors will be permitted to take this course with the approval of the head of the department.

Hort. 204. *Methods of Research*—Two credit hours. Lecture, one hour, one laboratory period. Second term.

For graduate students only. Special drill will be given in the making of briefs and outlines of research problems. In methods of procedure in conducting investigational work and in the preparation of bulletins and reports. A study of the origin, development and growth of horticultural research is taken up. A study of the research problems being conducted by the Department of Horticulture will be made, and students will be required to take notes on some of the experimental work in the field and become familiar with the manner of filing and cataloging all experimental work.

Hort. 205-207. *Advanced Horticultural Research and Thesis*—Two, three or four credit hours each term. Hours to be arranged. First, second and third terms.

Graduate students will be required to select problems for original research in either Pomology, Vegetable Gardening, Floriculture or Landscape Gardening. These problems will be continued until completed and final results are to be published in the form of a thesis.

Hort. 208-210. *Advanced Horticultural Seminar*—This course will be required of all graduate students. Students will be required to give reports either on special topics assigned them or on the progress of their own investigational work being done in course 205. Members of the departmental staff will report special research work from time to time.

Requirements of Graduate Students In Horticulture

Pomology—Graduate students specializing in Pomology who are planning to take an advanced degree will be required either to take or offer the equivalent of the following courses: Hort. 102-103, 104, 107, 201, 204, 205-207 and 208-10; Physiological Chemistry 101, Plant Bio-physics 201, Bio-chemistry 102; and Organic Chemistry 105-107.

Vegetable Gardening—Graduate students specializing in Vegetable Gardening who are planning to take an advanced degree will be required either to take or offer the equivalent of the following courses: Hort. 113-115, 116, 202, 204, 205-207, 208-210; Physiological Chemistry 101, Plant Bio-physics 201, Bio-chemistry 102; and Organic Chemistry 105-107.

Floriculture—Graduate students specializing in Floriculture who are planning to take an advanced degree will be required either to take or offer the equivalent of the following courses: Hort. 122-123, 124, 125, 126, 127, 128, 129, 132, 203, 204, 205-207, 208-210; Physiological Chemistry 101,

Plant Bio-physics 201, Bio-chemistry 102, and Organic Chemistry 105-107.

LANDSCAPE GARDENING—Graduate students specializing in Landscape Gardening who are planning to take an advanced degree, will be required either to take or offer the equivalent of the following courses: Hort. 132, 133, 134, 135, 136, 137, 138, 204, 205-207, 208-210.

ADDITIONAL REQUIREMENTS—In addition to the above required courses, all graduate students in Horticulture are advised to take Physical and Colloidal Chemistry.

Unless graduate students in Horticulture have had some course work in Entomology, Plant Pathology and Genetics, certain of these courses will be required.

For Short-Course Students

HORT. 1. *Practical Pomology*—Two lectures and one laboratory period. First term. First year.

A general course covering the propagation of our common fruits. Such subjects as orchard site, location, varieties, planting plans, cultural methods, fertilizer requirements, and picking, packing and marketing are discussed. All of the tree fruits are taken up in this course.

HORT. 2-3. *Commercial Fruit Growing*—Three lectures and one laboratory period. First and second terms. Second year. Prerequisite Hort. 1.

An advanced course dealing with the proper management of commercial orchards in Maryland. Special attention is given to the subjects of pruning, picking, packing, marketing and storing of the various fruits. Market problems, transportation and shipping associations receive special attention. Students are required to become familiar with all of the leading commercial varieties of all fruits grown in Maryland. Practice is given in fruit judging and the arrangement of fruits for exhibition purposes. Horticultural by-products are given attention in this course.

HORT. 4. *Small Fruits*—Two lectures and one laboratory period. Third term. Second year.

The production of strawberries, bush fruits and grapes is considered. Methods of propagation, selection of sites, soils, pruning, cultivation, picking, packing and marketing are discussed.

HORT. 5. *Home Vegetable Gardening*—Two lectures and one laboratory period. Third term. First year.

The general principles of vegetable gardening as applied to the growing of vegetables for home use. The laboratory work includes a study of vegetable seeds, seed testing, seed sowing, transplanting and the care of plants in the greenhouses and cold-frames. The students are required to plan, plant and manage a large home garden until the end of the term.

HORT. 6-8. *Commercial Vegetable Gardening*—Two lectures and one laboratory period. First, second and third terms. Second year. Prerequisite, Hort. 5.

This course is planned to run the entire school year. A study of the principles of vegetable gardening, as applied to the growing of vegetables

for market and for canning. The course includes the construction and management of hot-beds and cold-frames, sowing and planting, cultivation, growing early vegetable plants, soil preparation, harvesting, grading, packing, marketing, canning and storage. Each student is allotted a definite area and is required to plan, plant and manage it.

HORT. 9. *Landscape and Floriculture*—Two lectures and one laboratory. Second term. First year.

The principles of landscape gardening and their application to the improvement of home grounds. The propagation and culture of garden and greenhouse plants.

HORT. 10-12. *Commercial Floriculture*—Two lectures and one laboratory period. First, second and third terms. Second year. Prerequisite, Hort. 9.

This course is planned to run the full school year. Studies in the propagation and culture of commercial florist crops are taken up in this course. Methods of packing, shipping and marketing will be considered. The course is so organized as to fit students for commercial work.

HORT. 13-14. *Landscape Design and Practice*—Two lectures and three laboratory periods. First and second terms. Second year. Prerequisite, Hort. 13.

The composition of gardens, private estates and related problems. Grading plans, construction, drawing, estimates and laying out of grounds are considered. Plant materials are thoroughly studied in this course also.

PLANT PHYSIOLOGY AND BIO-CHEMISTRY

For Undergraduates

PLT. PHY. 101-102. *Plant Physiology*—Four credit hours: two lectures and two laboratory periods. Second term. Three credit hours: two lectures and one laboratory period. Third term. Sophomore year. Prerequisite, Gen. Bot. 101-102.

Water requirements, principles of absorption, mineral nutrients, transpiration, synthesis of food, metabolism, growth, movements.

PLT. PHYS. 103. *Plant Ecology*—Three credit hours: one lecture and two laboratory periods. Third term. Prerequisite, Bot. 101-102.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected. It is generally necessary to take three or four trips at some distance from the University, in which case Saturdays are used for that purpose.

For Advanced Undergraduates and Graduates

PLT. PHYS. 104-106. *Advanced Plant Physiology*—Four credit hours each term: two lectures and two laboratory periods. Junior or Senior year. Prerequisite, Plt. Phys. 101.

The laboratory work generally consists of special work on one or more problems that may continue through the year. Students who write theses for their undergraduate degrees, may use data obtained from special problems assigned for the laboratory work. (Zimmerman.)

BIO-CHEM. 101. *Physiological Chemistry*—Four credit hours. Two lectures and two laboratory periods. First term. Prerequisites, Gen'l Chem. 101-103, 105-106 or their equivalents; also an elementary knowledge of Organic Chemistry.

A general course in chemical biology. It embraces a study of biocolloids and their role in physiological processes; cell organization from the standpoint of the substratum in which living processes occur; chemistry of protoplasm and its products; catalysis and enzymes; electrolytes and their action; requirements of foods. including vitamines; and a general consideration of metabolism. (Appleman, Conrad.)

BIO-CHEM. 102. *Plant Bio-chemistry*—Three credit hours: two lectures and one laboratory period. Third term. Prerequisites, Bio-chem. 101 and an elementary knowledge of Plant Physiology.

An advanced course dealing with the chemistry of plant life. Synthesis and transformations of materials in plants and plant organs and the relation of plant processes to animal food and nutrition are especially emphasized. (Appleman, Conrad.)

For Graduates

PLT. PHYS. 201. *Plant Bio-physics*—Three credit hours: two lectures and one laboratory period. Second term. Prerequisites, one year's work in Physics and an elementary knowledge of Physical Chemistry and Plant Physiology.

An advanced study of the operation of physical forces in plant physiological processes. The relation of climatic conditions to plant growth and practice in recording meteorological data constitute a part of the course. (Johnston.)

PLT. PHYS. 202. *Special Problems in Growth and Reproduction*—Two credit hours. Second term. (Appleman, Johnston.)

PLT. PHYS. 203. *Advanced Physiological Methods and Measurements*—Two credit hours. Third term. Not given every year. (Appleman, Johnston.)

PLT. PHYS. 204-206. *Seminar*—One credit hour each term. The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject. (Appleman).

PLT. PHYS. 207. *Research*—Credit hours according to work done. Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Johnston.)

PLANT PATHOLOGY

PLT. PATH. 101. *General Plant Pathology*—Three credit hours: two lectures and one laboratory period. First term. Junior year.

An introductory study, in laboratory and field, of symptoms, causal organisms and control measures of horticultural and field-crop diseases.

For Advanced Undergraduates and Graduates

PLT. PATH. 102-104. *Methods and Minor Problems in Plant Pathology*—Credit to be arranged. Prerequisite, Plt. Path. 101 and General Bacteriology.

Technique in plant disease investigations including, the preparation of manuscripts for publication. The work will be adjusted to the requirements of the student. The senior thesis may be included as a part of this course. (Temple.)

PLT. PATH. 105-107. *Advanced Plant Pathology*—Four credit hours each term: two lectures and two laboratory periods.

A detailed study: first term, diseases of fruits; second term, diseases of truck crops; third term, diseases of cereal and forage crops. The full course is intended to give a rather thorough knowledge of the subject, such as is needed by those who expect to become advisers in crop production as well as those who expect to become specialists in plant pathology. (Temple.)

PLT. PATH. 108-110. *Seminar in Plant Pathology*—One credit hour each term.

Conferences and reports on plant pathological literature and recent investigations.

PLT. PATH. 202. *Research in Plant Pathology*—Credit according to work done.

Original investigations of special problems. (Temple.)

For Short-Course Students

PLT. PATH. 1. *Plant Diseases*—Three credit hours: two lectures and one laboratory period. First term. Second year.

A general elementary course covering the identification and control of the diseases of economic crops. Frequent field trips.

PLANT PHYSIOLOGY AND BIO-CHEMISTRY

PLANT PHYSIOLOGY

For Undergraduates

PLT. PHY. 101-102. *Plant Physiology*—Four credit hours: two lectures and two laboratory periods. Second term. Three credit hours: two lectures and one laboratory period. Third term. Sophomore year. Prerequisite, Gen. Bot. 101-102.

Water requirements, principles of absorption, mineral nutrients, transpiration, synthesis of food, metabolism, growth, movements.

PLT. PHYS. 103. *Plant Ecology*—Three credit hours: one lecture and two laboratory periods. Third term. Prerequisite, Bot. 101-102.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected. It is generally necessary to take three or four trips at some distance from the University, in which case Saturdays are used for that purpose.

For Advanced Undergraduates and Graduates

PLT. PHYS. 104-106. *Advanced Plant Physiology*—Four credit hours each term: two lectures and two laboratory periods. Junior or Senior year. Prerequisite, Plt. Phys. 101.

A detailed study of all life processes of plants. The laboratory work generally consists of special work on one or more problems that may continue through the year. Students who write theses for their undergraduate degrees, get the data from special problems assigned for the laboratory work.

For Graduates

PLT. PHYS. 201. *Plant Bio-physics*—Three credit hours: two lectures and one laboratory period. Second term. Prerequisites, one year's work in Physics and an elementary knowledge of Physical Chemistry and Plant Physiology.

An advanced study of the operation of physical forces in plant physiological processes. The relation of climatic conditions to plant growth and practice in recording meteorological data constitute a part of the course. (Johnston.)

PLT. PHYS. 202. *Special Problems in Growth and Reproduction*—Two credit hours. Second term. (Appleman.)

PLT. PHYS. 203. *Advanced Physiological Methods and Measurements*—Two credit hours. Third term. Not given every year. (Appleman, Johnston.)

PLT. PHYS. 204-206. *Seminar*—One credit hour each term. The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advance in the subject. (Appleman.)

PLT. PHYS. 207. *Research*—Credit hours according to work done. Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Johnston.)

BIO-CHEMISTRY

For Advanced Undergraduates and Graduates

BIO-CHEM. 101. *Physiological Chemistry*—Four credit hours. Two lectures and two laboratory periods. First term. Prerequisites, Gen'l Chem. 101-103, 105-106 or their equivalents; also an elementary knowledge of Organic Chemistry.

A general course in chemical biology. It embraces a study of biocolloids and their role in physiological processes; cell organization from the standpoint of the substratum in which living processes occur; chemistry of protoplasm and its products; catalysis and enzymes; electrolytes and their action; requirements of foods, including vitamines; and a general consideration of metabolism. (Appleman, Miller.)

BIO. CHEM. 102. *Plant Bio-Chemistry*—Three credit hours. Two lectures and one laboratory period. Third term. Prerequisites, Bio-chem. 101 and an elementary knowledge of Plant Physiology.

An advanced course dealing with the chemistry of plant life. Synthesis and transformations of materials in plants and plant organs and the relation of plant processes to animal food and nutrition are especially emphasized. The course also embraces the chemistry of organic compounds. (Appleman, Miller.)

POULTRY HUSBANDRY

P. H. 101. *Farm Poultry*—Three credit hours: two lectures and one laboratory period. Third term. Junior year.

Care of poultry on the general farm, including housing, feeding, incubation, brooding, breeds, breeding, selection of stock, culling, general management, and marketing.

For Short-Course Students

P. H. 1. *Farm Poultry*—Three credit hours: two lectures and one laboratory period. Third term. Second year.

A general course dealing with care of farm poultry, treating on breeds and breeding, selection of the stock, housing, feeding, incubation and brooding, culling, marketing, and management.

SOILS

GEOL. 101. *General Geology*—Three credit hours: two lectures and one laboratory period. First term. Sophomore year.

A text book, lecture, and laboratory course, dealing with the principles of geology and their application to agriculture. While this course is designed primarily for agricultural students in preparation for technical courses, it may also be taken as a part of a liberal education.

SOILS 101-102. *Principles of Soil Management*—Three credit hours: two lectures and one laboratory period. Second and third terms. Sophomore year. Prerequisite, Geol. 101.

A study of the physical, chemical and biological principles underlying the formation and management of soils. The mechanical composition, classification, and physical properties as related to moisture, temperature, air, organic matter, and tillage are concerned. The mixing and applying of commercial plant nutrients, the use of green and stable manures and of lime are discussed. The influence of continuous cropping, rotations, and fertilizers on the productivity of the soil are studied.

Soils 103-105. *Soil Fertility and Fertilizers*—Three credit hours: one lecture and two laboratory periods. Farm manures the first and second terms; commercial fertilizers the third term. Junior year. Prerequisite, Soils, 101-102. Alternate years. Not given in 1922-23.

The object of this course is to familiarize the student with the details of soil management. It includes the practical application of the principles of soil physics to methods of tillage and cropping and a study of the factors governing the use of manures and fertilizers. The practical work includes special studies of the soils from the college station farms that have been subjected to various treatments.

Soils 106. *Soil Surveying and Classification*—Three credit hours: one lecture and two laboratory periods. First term. Senior year. Prerequisite, Soils 101-102.

A study of the principal soil regions, series, and types of the United States, and especially of the soils of Maryland, as to formation, composition, and value agriculturally. The practical work consists chiefly in identification of soils types and in map making.

Soils 107. *Soil Bacteriology*—Four credit hours: two lectures and two laboratory periods. Third term. Junior year. Prerequisite, Bact. 101-102. Alternate years.

A study of the micro-organisms of the soil in relation to fertility. It includes the study of the bacteria of the soil concerned in the decomposition of organic matter, nitrogen fixation, nitrification, sulfafication, such as fungi, algae and protozoa.

Soils 108-110. *Thesis*—Two credit hours. The senior year.

Some special problem is assigned to each student, who is expected to embody the results of the investigation in a thesis.

For Advanced Undergraduate and Graduate Students

Soils 111-113. *Soil Technology*—Three credit hours: one lecture and two laboratory periods. The year. Prerequisites, Soils 101-102; Chemistry 101-103. Alternate years. Not given in 1923-24.

The technique of field, laboratory and greenhouse manipulation as applied to the study of soil problems. (McCall.)

Soils 114. *Methods of Soil Investigation*—Two credit hours. Third term.

The course includes a critical study of the methods used by experiment stations in soil investigational work. (McCall and Bruce.)

Soils 115-116. *Seminar*—One credit hour. Second and third terms.

The seminar periods are devoted largely to the discussion of the current bulletins and scientific papers on soil topics. (McCall and Bruce.)

For Graduate Students

Soils 201-203. *Special Problems and Research*—Five to ten credit hours. The year. Lectures and Laboratory to be arranged.

Original investigations of problems in soils and fertilizers. (McCall.)

For Short-Course Students

Soils 1. *Soil Management*—Three credit hours: two lectures and one laboratory period. Third term. First year.

A study of the physical and chemical conditions of soils in their relation to profitable agriculture. Special attention is given to the application of physics and chemistry to the management of Maryland soils.

Soils 2. *Manures and Fertilizers*—Three credit hours: two lectures and one laboratory period. First term. Second year.

Lectures and recitations on the care and utilization of farm manures; on the sources of fertilizer material; on methods of valuation and the effect of fertilizers on different farm crops.

College of Arts and Sciences

The aim of the College of Arts and Sciences is twofold:

1. To lay a foundation for the learned and technical professions and give training in those phases of economics that enlarge the capacity of men and women for handling modern business problems.

2. To increase knowledge of the broader and cultural phases of learning.

This College furnishes curricula which develop a liberal education in the languages and literature, the sciences, mathematics, philosophy, history, politics, economics, and sociology. It likewise offers excellent opportunities to students preparing to enter Schools of Law and Medicine.

The College includes the following departments:

Ancient Language and Philosophy.
Business Administration and Commerce.
Chemistry.
English Language, Literature and Journalism.
Economics and Sociology.
General Botany.
History and Political Science.
Library Science.
Mathematics.
Modern Languages and Literature.
Music.
Physics.
Public Speaking.
Zoology and Aquiculture.
The Pre-Medical Curriculum.

Admission

The admission of students is in charge of the University Committee on Student Enrollment and Entrance, which determines the credits which shall be issued on all entrance examinations and certificates.

Requirements for Baccalaureate Degree

The College of Arts and Sciences confers two baccalaureate degrees:

1. Bachelor of Arts.
2. Bachelor of Science.

General Requirements

In order to be recommended for the degree of Bachelor of Arts or Bachelor of Science, the candidate must first have satisfied the requirements for admission; and second, have obtained a prescribed minimum number of college credits.

The "trimester hour" is the standard for computing the amount of work required for graduation in the curricula leading to these baccalaureate degrees. The "hour" represents one recitation hour each week during a term. Two or three hours of laboratory or field work are counted as equivalent to one lecture or recitation.

A baccalaureate degree in this College may be conferred upon a student who satisfies all entrance requirements and secures credit for a minimum of two hundred and four trimester hours according to the following provisions, except for those majoring in Chemistry or Business Administration, for which there are special requirements. Freshman and Sophomore years for those registering for the Bachelor of Arts degree are coordinated as follows:

FRESHMAN YEAR — *Term:*	*I*	*II*	*III*
Composition and Rhetoric (Eng. 101-103)	3	3	3
Reading and Speaking (Pub. Sp. 101-103)	1	1	1
Foreign Language (Gk. 1-3; Gk. 101-103; Lat. 101-103; Fren. 1-3; Fren. 101-103; Ger. 1-3; Germ. 101-103; Span. 101-103)	3	3	3
Gen. Chem. and Qual. Anal. (Inorg. Chem. 101-103)	4	4	4
Algebra (Math. 106 or 107)	3	..	..
Plane Trigonometry (Math. 108)	..	3	..
Plane Analytic Geometry (Math. 109)	..	..	3
Modern and Contemporary History (H. 109-111)	3	3	3
Library Methods (L. S. 101)	1	..	..
Military Science (M. I. 101)	2	2	2
*General Zoology (Zool. 101-102)	4	4	..
*Entomology (Zool. 107) or General Botany (Bot. 101)	..	..	4

*Required in the Pre-Medical curriculum.

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
*Modern Poets and Browning (Eng. 107-109)	3	3	3
*American Literature (Eng. 110-112)	3	3	3
*History of English Literature (Eng. 119-121)	3	3	3
Public Speaking (Pub. Sp. 104-106)	1	1	1
Foreign Language (continued)	3	3	3
†Social Psychology (Soc. 104-105)	3	3	..
†Logical Aspects of Sociology (Soc. 106)	..	..	3
†Elements of Economics (Econ. 101-103)	3	3	3
National Government (Pol. Sc. 101)	3	..	..
State and Local Government (Pol. Sc. 102)	..	3	..
Municipal Government (Pol. Sc. 103)	..	..	3
General Zoology (Zool. 101-102)	4	2	..
‡Entomology (Zool. 107)	..	..	4
‡General Botany (Bot. 101)	..	2	4
Military Science (M. I. 102)	2	2	2

*Select one of these.
†Select one of these.
‡Select one of these.

Junior and Senior Years

At the beginning of the Junior year every candidate for the Bachelor of Arts degree shall select major work in group A or B, in which he shall have completed by the end of his Senior year from twenty-five to forty per cent of the total number of hours necessary for graduation. Candidates for the Bachelor of Science degree shall select major work in group B, C, or D. Candidates for the degree of Bachelor of Science, majoring in Chemistry, see Chemistry Curricula. Candidates for the degree of Bachelor of Science in Economics, majoring in Business Administration and Commerce, see curriculum of Business Administration and Commerce. All candidates shall select subjects with a direct bearing upon their major work amounting to twenty or thirty per cent of the total number of hours necessary for graduation.

Groups of Major Work

A. Languages and Literature: English, Public Speaking, Journalism, Latin, Greek, French, German, Spanish.
B. Social Sciences: Economics, Commerce, Business Administration, History, Political Science, Philosophy, Psychology, Sociology.
C. Biological Sciences: Bacteriology, Botany, Zoology.
D. Physical Sciences: Chemistry, Physics, Mathematics, Geology.

COMMERCE AND BUSINESS ADMINISTRATION

As a result of the increasingly differentiated economic development of this country and other countries and owing to the concomitant development of higher and more complex forms of business organization, the last two decades have witnessed the origin and growth of the full four-year curriculum, the aim of which is to furnish specialized training for those who wish to enter upon a business career, very much in the same way as schools of law and medicine provide specialized training for lawyers and medical men.

As at present organized, this department offers what is practically a four-year curriculum having this special aim. However, this first year is coincident with the first year of the College of Arts and Sciences; i. e., subject to the same conditions of entrance and required subjects. In other words, the student who wishes to major in business administration and commerce does not enter upon this specialization until the beginning of his sophomore year.

The student will receive four years of training sufficiently broad and well balanced and at the same time sufficiently specialized to equip him for any modern business.

The following arrangement of studies, therefore, presupposes one year of college work, which will be the freshman year in the College of Arts and Sciences. The last three years, however, should include what is here outlined:

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
Modern Language	3	3	3
National Government (Pol. Sc. 101)	3	..	..
State and Local Government (Pol. Sc. 102)	..	3	..
Municipal Government (Pol. Sc. 103)	..	..	3
Elements of Economics (Econ. 101-103)	3	3	3
Social Psychology (Soc. 104-105)	3	3	..
Logical Aspects of Sociology (Soc. 106)	..	..	3
Public Speaking (Pub. Sp. 104-106)	1	1	1
R. O. T. C. (M. I. 102)	2	2	2
Current History (His. 101-103)	1	1	1
English (Eng. 104-106)	2	2	2

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Business Organization (Com. 113)	3	..	..
Business Management (Com. 114)	..	3	..
Industrial Management (Com. 115)	..	..	3
Corporation Finance (Econ. 103)	3	..	..
Money and Banking (Econ. 104)	..	3	..
Commerce and Finance (Practicum) or Markets and Marketing	..	..	3
Diplomacy (Pol. Sc. 113-115)	3	3	3
Business Law (Com. 110-112)	3	3	3
Accounting (101-103, 104-106)	3	3	3
Group Electives	3	3	3

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Constitutional Law (Pol. Sc. 106-108)	3	3	3
Markets and Marketing (Econ. 107) or Commerce and Finance	..	..	3
Group Electives	9	9	9
Free Electives	6	6	3

Elective Groups

Accounting (Com. 101-103)	3	3	3
Advanced Accounting (Com. 104-106)	3	3	3
Commercial Mathematics (Com. 107-109)	3	3	3
Social Psychology (Soc. 104-105)	3	3	..
Logical Aspects of Sociology (Soc. 106)	..	..	3
General Sociology (Soc. 101-102)	3	3	..
Business Law (Com. 110-112)	3	3	3
Modern Language	3	3	3
International Law (Pol. Sc. 116-118)	3	3	3
Current History (His. 101)	1	1	1
General History	3	3	3
Public Speaking	2	2	2

CHEMISTRY

The Department of Chemistry of the College of Arts and Sciences offers courses in Inorganic, Organic, Physical, Analytical and Industrial Chemistry; and also includes the State control work of fertilizers, feed and lime analysis.

The above named courses, which include the basic principle of Chemistry, serve as a necessary part of a general education, and are designed to lay a foundation for scientific and technical work; such as medicine, engineering, agriculture, etc.

Besides serving in this fundamental way the courses are grouped to train chemists for the following careers:

1. *Industrial Chemist*—Chemistry is becoming more and more to be realized as the basis of many industries. Many apparently efficient chemical industries have become greatly improved by the application of modern chemistry. Chemical corporations employ chemists to manage and develop units of their plants.

A curriculum as preparation for Industrial Chemist is given below.

2. *Agricultural Chemist*—The curriculum suggested on page 94 fits men to carry on work in Agricultural Experiment stations, Bureau of Soils, food laboratories, geological surveys, etc.

3. *Teacher of Chemistry*—There is a growing need of suitably trained science teachers in schools. The curriculum on page 95 not only furnishes the necessary science but also names the educational subjects which are required to obtain the Special Teachers Diploma.

The same curriculum together with graduate work will fit a man to teach in college or university.

4. *Research Chemist*—The more progressive corporations have established chemical research laboratories. These laboratories are run with the main purpose of improving old processes and devising new ones. Highly trained chemists have charge of these laboratories. The general chemistry curriculum, page 96, is for the undergraduate work, but for these positions work leading to a Master of Science or a Doctor of Philosophy degree is advised.

Industrial Chemistry

SOPHOMORE YEAR — *Term:*	*I*	*I*	*III*
Physics (Phys. 101-103)	5	5	5
Plane Analytic Geometry (Math. 110)	3	..	..
Calculus (Math. 111)	..	3	3
Modern Language (M. L. 104-106, 124-126)	3	3	3
Advanced Qualitative Analysis (Anal. Chem. 101)	4	..	..
Quantitative Analysis (Anal. Chem. 102-103)	..	4	4
Descriptive Geometry (Dr. 104)	2	..	..
Machine Shop (Shop 101)	..	2	..
Plane Surveying (Surv. 101)	..	..	2
Military Science (R. O. T. C.)	2	2	2

NOTE: The Freshman year for those majoring in Chemistry is the same as for other students in the College of Arts and Sciences.

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
Organic Chemistry (Org. Chem. 105-107)	4	4	4
Quantitative Analysis (Anal. Chem. 104-105)	3	3	..
Mineralogy and Assaying (Anal. Chem. 108)	..	..	3
Chemical Calculations (Anal. Chem. 106)	1	1	1
Engineering Mechanics (Mech. 101-103)	3	3	3
Engineering Geology (Geol. 101-103)	1	1	1
Advanced Composition (Eng. 104-106)	2	2	2
Economics (Econ. 101-103)	3	3	3

SENIOR YEAR — *Term:*	*I*	*II*	*III*
Physical Chemistry (Phys. Chem. 101-102)	4	4	..
Electro Chemistry (Phys. Chem. 104)	..	..	4
Colloidal Chemistry (Phys. Chem. 103)	..	..	4
Industrial Chemistry (Ind. Chem. 115-117)	2	2	2
Metallurgical Analysis (Ind. Chem. 113-114)	3	3	..
Metallurgical Calculations (Ind. Chem. 112)	1	1	1
Prime Movers (Engr. 107-109)	3	3	3
Engineering Jurisprudence (Engr. 101-103)	1	1	1
Electives in Engineering	3-4	3-4	3-4

Agricultural Chemistry

SOPHOMORE YEAR — *Term:*	*I*	*II*	*III*
Physics (Phys. 101-103)	5	5	5
Plane Analytic Geometry (Math. 110)	3	..	..
Calculus (Math. 111)	..	3	3
Modern Language (M. L. 104-106, 124-126)	3	3	3
Advanced Qualitative Analysis (Anal. Chem. 101)	4	..	..
Quantitative Analysis (Anal. Chem. 102-103)	..	4	4
Zoology (Zool. 101-102)	3	3	..
Botany (Bot. 101)	..	..	4
Military Science (R. O. T. C.)	2	2	2

JUNIOR YEAR — *Term:*	*I*	*II*	*III*
English (Eng. 104-106)	2	2	2
Economics (Econ. 101-103)	3	3	3
Organic Chemistry (Org. Chem. 105-107)	4	4	4
Quantitative Analysis (Anal. Chem. 104-105)	3	3	..
Chemical Calculations (Anal. Chem. 106)	1	1	1
Bacteriology (Bact. 101-102)	..	..	3
Electives	4	4	4
Group 1			
Cereal Crops (Agro. 101)	4	..	..
Plant Physiology (Plt. Phys. 101-102)	..	4	3
Forage Crops (Agro. 103)	..	..	4

Group 2			
Geology (Soils 101)	3	..	..
Soils (Soils 102-103)	..	3	3
Group 3			
Feeds and Feeding (A. H. 102)	3	3	..
Animal Husbandry (A. H. 102)	..	4	..
Principles of Dairying (D. H. 101)	..	..	4
Forage Crops (Agro. 101)	..	..	3

SENIOR YEAR *Term:*	*I*	*II*	*III*
Physical Chemistry (Phys. Chem. 101-102)	4	4	..
Colloidal Chemistry (Phys. Chem. 103)	..	..	4
Agricultural Chemistry (Ind. Chem. 104-106)	2	2	2
Agricultural Chemical Analysis (Ind. Chem. 107-109)	3	3	3
Biological Chemistry (Bio. Chem. 101-102)	4	..	3
Electives in Agriculture	4-5	8-9	5-6

General Chemistry

SOPHOMORE YEAR *Term:*	*I*	*II*	*III*
Physics (Phys. 101-103)	5	5	5
Plane Analytic Geometry (Bath. 110)	3	..	..
Calculus (Math. 111)	..	3	3
Modern Language (M. L. 104-106, 124-126)	3	3	3
Advanced Qualitative Analysis (Anal. Chem. 101)	4	..	..
Quantitative Analysis (Anal. Chem. 102-103)	..	4	4
Zoology (Zool. 101-102)	3	3	..
Botany (Bot. 101)	..	..	4
Military Science (R. O. T. C.)	2	2	2

JUNIOR YEAR *Term:*	*I*	*II*	*III*
English (Eng. 104-106)	2	2	2
Economics (Econ. 101-103)	3	3	3
Organic Chemistry (Org. Chem. 105-107)	4	4	4
Quantitative Analysis (Anal. Chem. 104-105)	3	3	..
Chemical Calculations (Anal. Chem. 106)	1	1	1
Bacteriology (Bact. 101)	..	..	3
*Electives	4-5	4-5	4-5

SENIOR YEAR *Term:*	*I*	*II*	*III*
Physical Chemistry (Phys. Chem. 101-102)	4	4	..
Physical Chemistry (Phys. Chem. 104)	..	..	4
Colloidal Chemistry (Phys. Chem. 103)	..	..	4
Biological Chemistry (Bio. Chem. 101)	4	..	..
Electives in Chemistry	4	4	4
*Electives	5-6	9-10	5-6

*Elective groups are offered in Education, Arts, Political Science and Science.

THE PRE-MEDICAL CURRICULUM

The Premedical Curriculum includes the subjects and hours prescribed by the Council on Medical Education of the American Medical Association, together with additional subjects and hours totalling 68 to 70 semester hours exclusive of military drill.

Preference will be given students entering the School of Medicine of the University of Maryland, who present the credits obtained by the successful completion of this curriculum or its equivalent of 68 hours in 1924. In 1922 and 1923 all students must satisfy the sixty (60) semester hour requirement of the Council on Medical Education of the American Medical Association.

In addition a combined seven-year curriculum is offered leading to the degrees of Bachelor of Science and Doctor of Medicine. The first three years are taken in residence at College Park and the last four years in Baltimore at the Medical School. The Premedical Curriculum constitutes the first two years' work and a third year following the general outline given below, with the electives approved by the chairman of the Premedical curriculum and the Dean of the College of Arts and Sciences, completes the studies at College Park.

Upon the successful completion of the first year in the Medical School and the recommendation of the Dean, the degree of Bachelor of Science may be conferred by the College of Arts and Sciences at College Park .

Students are urged to consider carefully the advantages this combination course offers over the minimum requirements of the two years. By completing three years, the training may be greatly broadened by a wider latitude in the election of courses in the arts subjects.

Requirements for admission to the Premedical Curriculum may be found on pages 97 and 98.

Pre-Medical Curriculum

Two Years

FRESHMAN YEAR *Term:*	*I*	*II*	*III*
General Zoology (Zool. 101-103 and 101a, 101b, 103c)	4	4	4
Chemistry (Chem. 101-103)	4	4	4
French or German (Fren. or Ger. 1-3)	3	3	3
Composition (Eng. 101-103)	3	3	3
Mathematics (Math. 106-107-108-109)	3	3	3
Public Speaking (Pub. Sp. 101-103)	1	1	1
R. O. T. C.	2	2	2

SOPHOMORE YEAR	*Term:*	*I*	*II*	*III*
Embryology (Zool. 104-105)		4	2	..
Comparative Morphology of the Vertebrates (Zool. 107)		..	..	3
Organic Chem. (Org. Chem. 105-106)		4	4	..
Quantitative Analysis (Anal. Chem. 107)		..	..	4
Physics (Phys. 104-106)		4	4	4
French or German (101-103)		3	3	3
Composition, History, Literature or Sociology (Elect one)		2-3	2-3	2-3
R. O. T. C.		2	2	2

Combined Seven-Year Course

JUNIOR YEAR	*Term:*	*I*	*II*	*III*
Required				
Advanced Composition (Eng. 104-106)		2	2	2
Group B—(College of Arts and Sciences)		3	3	3
Group Electives—				
Science (Bacteriology, Botany, Chemistry, Entomology, Genetics, Mathematics and Zoology)		6	6	6
Non-Science		7	7	7

SENIOR YEAR

The curriculum of the first year of the Medical school.

The student may also elect the fourth year's work from advanced courses offered in the College of Arts and Sciences.

Requirements for Entrance

Admission to the curriculum in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student's Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and in addition:

(b) Two years, sixty semester, or ninety trimester hours, of college credits, including chemistry, biology, physics and English in 1922. In 1923 the completion of 117 to 120 trimester hours as outlined in the Premedical Curriculum, or its equivalent, will be required.

Women are admitted to the Medical School of this University.

(a) Details of the High School Requirements

For admission to the Premedical Curriculum, students

1. Shall have completed a four-year course of 15 units in a standard accredited high school or other institution of standard secondary school grade, or:

2. Shall have the equivalent as demonstrated by successfully passing entrance examinations in the following subjects:

Credits for admission to the premedical college course may be granted for the subjects shown in the following list and for any other subject counted by a standard accredited high school as a part of the requirement for its diploma, provided that at least eleven units must be offered in Groups I-V:

Schedule of Subjects Required or Accepted for Entrance to the Pre-Medical Curriculum

Subjects	*Units*	*Required*
Group I.—English:		
Literature and composition	3-4	3
Group II.—Foreign Languages:		
Latin	1-4	..
Greek	1-3	*2
French or German	1-4	..
Other foreign languages	1-4	..
Group III. Mathematics:		
Elementary Algebra	1	1
Advanced Algebra	½-1	..
Plane Geometry	1	1
Solid Geometry	½	..
Trigonometry	½	..
Group IV.—History:		
Ancient History	½-1	..
Medieval and Modern History	½-1	..
English History	½-1	1
American History	½-1	..
Civil Government	½-1	..
Group V.—Science:		
Botany	½-1	..
Zoology	½-1	..
Chemistry	1	..
Physics	1	..
Physiography	½-1	..
Physiology	½-1	..
Astronomy	½	..
Geology	½-1	..

GROUP VI.—MISCELLANEOUS:

Agriculture	1-2	..
Bookkeeping	½-1	..
Business Law	½	..
Commercial Geography	½-1	..
Domestic Science	1-2	..
Drawing.—Freehand and Mechanical	½-2	..
Economics and Economic History	½-1	..
Manual Training	1-2	..
Music.—Appreciation or Harmony	1-2	..
Stenography	1	..

*Both of the required units of Foreign Language must be of the same language, but the two units may be presented in any one of the languages specified.

Of the fifteen units of high school work, eight units are required, as indicated in the foregoing schedule; the balance may be made up from any of the other subjects in the schedule.

(b) Details of the College Requirements

1. The preliminary college curriculum shall extend through two college sessions of at least thirty-two weeks each of actual instruction.

2. In excellence of teaching and in content, the work of this preliminary college curriculum shall be equal to the work done in the freshman and sophomore years in standard colleges and universities.

SCHEDULE OF SUBJECTS OF THE TWO-YEAR PRE-MEDICAL COURSE

Minimum requirements for 1922, 60 semester* or 90 trimester hours required.

For 1923 requirements, see Pre-Medical Curriculum, page 96.

	Semester Hours
Required Subjects:	
Chemistry (a)	12
Physics (b)	8
Biology (c)	8
English Composition and Literature (d)	6
Other Non-Science Subjects (e)	12
Subjects Strongly Urged:	
French or German (f)	6-12
Advanced Botany or Advanced Zoology	3-6
Psychology	3-6
Advanced Mathematics, including Algebra and Trigonometry.	3-6
Additional Courses in Chemistry	3-6
Other Suggested Electives:	
English (additional), Economics, History, Sociology, Political Science Logic, Mathematics, Latin, Greek, Drawing.	

*A semester hour is the credit value of sixteen weeks' work consisting of one lecture or recitation period per week (each period to be not less than fifty minutes net); at least two hours of laboratory work to be considered as the equivalent of one lecture or recitation period.

Suggestions Regarding Individual Subjects

(a) *Chemistry*—Twelve semester hours required, of which at least eight semester hours must be in general inorganic chemistry, including four semester hours of laboratory work. In the interpretation of this rule, work in qualitative analysis may be counted as general inorganic chemistry. The remaining four semester hours may consist of additional work in general chemistry or of work in analytic or organic chemistry.

(b) *Physics*—Eight seemster hours required, of which at least two must be laboratory work. It is urged that this course be preceded by a course in trigonometry. This requirement may be satisfied by six semester hours of college physics, of which two must be laboratory work, if preceded by a year (one unit) of high school physics.

(c) *Biology*—Eight semester hours required, of which four must consist of laboratory work. The requirement may be satisfied by a course of eight semester hours in either general biology or zoology, or by courses of four semester hours each in zoology and botany, but not by botany alone.

(d) *English Composition and Literature*—The usual introductory college course of six semester hours, or its equivalent, is required.

(e) *Nonscience Subjects*—Of the sixty semester hours required as the measurement of two years of college work, at least eighteen, including the six semester hours of English should be in subjects other than the physical, chemical or biological sciences.

(f) *French or German*—A reading knowledge of one of these languages is strongly urged. If the reading knowledge in one of these languages is obtained on the basis of high school work, the student is urged to take the other language in his college course. It is not considered advisable, however, to spend more than twelve of the required sixty semester hours on foreign languages. In case a reading knowledge of one language is obtained by six semester hours of college work, another six semester hours may be well spent in taking the beginner's course in the other language; if this is followed up by a systematic reading of scientific prose, a reading knowledge of the second language may be readily acquired. When a student spends more than two years in college he may well spend twelve semester hours of his college work in the second language.

DESCRIPTION OF COURSES

ENGLISH LANGUAGE AND LITERATURE

For Short-Course Students

ENG. 1-2. *Practical Composition*—Three credit hours. First and second terms. Prerequisites, minimum entrance requirements for short-course students.

Elements, thought processes, types, structure, grammar, mechanical details and common errors of plain composition. Study and preparation of

commercial letters, forms, articles, reports, and advertisements. Regular practice in long and short themes.

ENG. 3. *Practical Composition*—Two credit hours. Third term.

A continuation of Eng. 1-2.

For Undergraduates

ENG. 101-103. *Composition and Rhetoric*—Three credit hours each term. Three terms. Freshman year. Prerequisites, minimum entrance requirements in English. (Required of all four-year students.)

Parts, principles, and conventions of effective thought communication. Reading, study, and analysis of standard contemporary prose specimens. Short papers and term themes.

ENG. 104-106. *Advanced English Composition*—Two credit hours each term. Three terms. Prerequisite, Eng. 101-103.

Lectures on principles of composition. Study and analysis of the best scientific essays. Practice in expository writing. Term themes and monographs.

ENG. 107-108. *Modern Poets*—Three credit hours each term. First and second terms. Prerequisite, Eng. 101-103.

Lectures on the nature and function of poetry. Reading from wide variety of English and American lyric poets of recent time. Studies in literary personalia and poetical analysis.

ENG. 109. *Poems of Robert Browning*—Three credit hours. Third term.

A continuation of Eng. 107-108. The shorter poems of Browning read and discussed.

ENG. 110-112. *American Literature*—Three credit hours. Three terms. Prerequisite, Eng. 101-103.

1. American poetry.
2. American essay, oration, and debate.
3. American short story.

Lectures on growth of American literary types. Reports on assigned topics. Term themes.

ENG. 113-114. *The Novel*—Three credit hours each term. First and second terms. Prerequisite, Eng. 101-103.

Lectures on the principles of narrative structure and style. Class reviews of selected novels, chiefly from English and American sources. Some account of the history of the development of English fiction.

ENG. 115. *English and American Essays*—Three credit hours. Third term. (Designed to follow Eng. 113-114.)

A study of the philosophical and critical essays of England and America: Bacon, Lamb, Macaulay, Carlyle, Ruskin, Chesterton, Emerson.

ENG. 116-118. *The Drama*—Three credit hours. Three terms. Prerequisite, Eng. 101-103.

1. Modern Drama, including the plays of English and American dramatists of modern times. Wilde, Pinero, Jones, Galsworthy, Barker, Yeats,

Synge, Gregory, Fitch, Moody, Thomas, Mackaye, Bennett, Knoblock, Mangham, Drinkwater, Ervine, Dunsany, Walter, Peabody, and Hazelton.

2. American Drama, covering the best and most successful plays in the history and development of the dramatic art in America: Godfrey, Tyler, Dunlap, Barker, Payne, Irving, Smith, Autis, Bird, Willis, Ritchie, Baker, Howe, Boncicault, Jefferson, Howard, Gillette, Belasco, Long, Sheldon, Crothers, and Tarkington.

3. English Drama, including a study of dramatic types, and a survey of the principal English dramatists (excluding Shakespeare). Lyly, Marlowe, Dekker, Heywood, Beaumont, Fletcher, Jonson, Webster, Middleton, Rowley, Dryden, Otway, Congreave, Addison, Steele, Fielding, Goldsmith, Sheridan, Shelley, Bulwer-Litton and Wilde.

ENG. 119-121. *History of English Literature*—Three credit hours each term. Three terms.

A general survey of the subject with wide readings of English Classics.

ENG. 122-124. *Journalism*—One credit hour each term. Three terms. Prerequisite, Eng. 101-103.

1. Study and criticism of the modern newspaper; lectures on the editorial, mechanical, and business divisions and on the classification of duties and responsibilities. Introduction to news writing. Class practice and assignments. 2. Types of news stories, new sources, and editorial theory and practice, including copy reading, proof reading, head writing, make-up, and editorial functions and qualifications. Lectures, class practice, and assignments. 3. Feature writing with a study of types and styles of feature stories. Practical application with a view to correlating the journalistic course with other university courses. Lectures, class practice, and assignments.

ENG. 125-127. *Shakespeare*—Three credit hours each term. Three terms. Prerequisite, Eng. 101-103.

An intensive study of selected plays.

ENG. 128-130. *Modern Business Writing*—One credit hour each term. Three terms. Prerequisites, Eng. 101-103 and Eng. 104-106.

The following topics will be studied: the language of business, good usage, and the elements of expression, the type-written form, special study of words, paragraph structure, correct punctuation, everyday letters, correspondence in form and practice, circulars and advertisements, the selling appeal, the psychological approach as applied to the letter.

For Undergraduates and Graduates

ENG. 131-133. *Anglo-Saxon and Middle English*—Three credit hours each term. Students must enter at the beginning of the year, and should plan to continue during the full three terms.

1. Study of Anglo-Saxon (Old English) grammar and literature. Lectures on the principles of comparative philology and phonetics.
2. Beowulf through 2,000 lines.
3. The language and authorship of the Middle English period, ending with Chaucer. (House).

For Graduate Students

ENG. 201-203. *Seminar*—Original research and the preparation of dissertations looking toward advanced degrees. Credit proportioned to the amount of work and ends accomplished. (House.)

ENG. 204-206. *Elizabethan Literature*—Three credit hours each term. Three terms.

1. Shakespeare: Study of all of Shakespeare's plays.
2. Chief Elizabethan Dramatists (omitting Shakespeare).
3. Milton. (Lemon.)

ENG. 207-209. *Romantic Poets*—Three credit hours each term. Three terms.

1. Wordsworth and Coleridge.
2. Byron and Keats.
3. Shelley and Southey.

Lectures. Reports on assigned topics. Themes. (Lemon.)

ENG. 210. *Browning's Dramas*—Three credit hours. First term.

Luria; Return of the Druses; Colombe's Birthday; Pippa Passes; A Blot in the 'Scutcheon. (House.)

ENG. 211. *Tennyson*—Three credit hours. Second term.

Lectures on the art of poetry, followed by a detailed reading of The Princess. Survey of other important poems of this author. (House.)

ENG. 212. *Ballad Literature*—Three credit hours. Third term.

Traditional English and Scottish ballads. Modern imitative ballads. American folk ballads. Popular song literature. (House.)

MODERN LANGUAGE AND LITERATURE

FRENCH

For Undergraduates

FREN. 1-3. *Elementary French*—Three credit hours each term. Three terms.

Drill upon pronunciation, elements of grammar, composition, conversation, easy translation. For beginners.

This course must be followed by Fren. 101-103.

FREN. 101-103. *Second-Year French*—Three credit hours each term. Three terms. Prerequisite Fren. 1-3 or the equivalent.

Grammar continued, composition, conversation, translation, and reproductions. Texts selected from modern prose and poetry.

This course must be taken by those who offer two units in French for entrance.

FREN. 104-106. *Development of the French Novel*—Three credit hours each term. Three terms. Prerequisite Fren. 101-103.

Detailed study of the history and the development of the novel in French

literature. Study of the lives, works, and influence of various novelists.

This course alternates with Fren. 107-109.

FREN. 107-109. *Development of the French Drama*—Three credit hours each term. Three terms. Prerequisite Fren. 101-103.

Analysis and study of the French drama of the seventeenth, eighteenth, and nineteenth centuries. Lectures, translation, collateral reading and reports.

This course alternates with French 104-106.

For Advanced Undergraduates

FREN. 110-112. *History of French Literature*—Three terms. Prerequisite Fren. 107-109 or 104-106.

Study of French literature from the earliest times to the present. Reading and translation of representative works; texts and lectures. (Kramer.)

GERMAN

For Undergraduates

GERM. 1-3. *Beginning German*—Three credit hours each term. Three terms.

Drill in pronunciation, elements of grammar, composition, conversation, dictation, and translation. For beginners.

This course must be followed by Germ. 101-103.

GERM. 101-103. *Second-Year German*—Three credit hours each term. Three terms. Prerequisite Germ. 1-3 or the equivalent.

Syntax, composition, conversation, translation, and reproductions. Selections from modern prose, poetry, and fiction.

This course is for those students who offer two units in German for entrance.

GERM. 104. *Goethe and the Novel*—Three credit hours for the first half year. Prerequisite Germ. 101-103. This course is to be followed by Germ. 105. Given in alternate years.

Critical study of the life and works of Goethe together with the principles and development of the modern German novel.

GERM. 105 *Schiller and the Drama*—Three credit hours for the second half year. Prerequisites Germ. 104.

Detailed study of the life and works of Schiller and his relation to the development of the German drama.

GERM. 106. *Lessing and German Prose*—Three credit hours for the first half year. Prerequisite Germ. 101-103. This course is to be followed by Germ. 107. Alternates with Germ. 104.

A study of the life and works of Lessing and his relation to the history of German prose.

GERM. 107. *Heine and German Poetry*—Three credit hours for the second half year. Prerequisite Germ. 106.

Extensive study of Heine and German poetry. Collateral reading. Lectures on the history of German poetry. Reports.

For Advanced Undergraduates

GERM. 108-110. *History of German Literature*—Three credit hours each term. Three terms. Prerequisite Germ. 104-105 or Germ. 106-107.

Study of German literature from the earliest times to the present. Reading and translation of representative works. Lectures, collateral reading and reports. (Kramer.)

SPANISH

For Undergraduates

SPAN. 1-3. *Beginners' Spanish*—Three credit hours each term. Three terms. To be followed by Span. 101-103.

A study of the elements of grammar with emphasis laid on verb, composition, and conversation.

SPAN. 101-103. *Elementary Spanish*—Three credit hours each term. Three terms. To be followed by Span. 104-106. Prerequisite Span. 1-3 or the equivalent.

The advanced study of grammar is commenced. Composition and reading of texts relating to the habits, customs, etc., of Spanish countries. Instruction is given in Spanish as far as possible.

SPAN. 104-105. *Intermediate Spanish*—Three credit hours each term. Two terms. To be followed by Span. 106. Prerequisite Span. 101-103 or the equivalent.

The study of grammar continued. Drill in idioms. Lectures and assigned work given in the history and development of Spain and South America.

SPAN. 106. *Commercial Forms*—Three credit hours. One term. Prerequisite Span. 104-105.

The writing and discussion of business forms and etiquette. A review of the field of commerce in South America.

For Advanced Undergraduates

SPAN. 107-109. *Modern Spanish Literature*—Three credit hours each term. Three terms. Prerequisite Span. 104-106.

Study of modern writers of Spain and South America. Lectures, collateral reading and reports. (Stinson.)

SPAN. 110-112. *Spanish Literature in the Golden Age*—Three credit hours each term. Three terms. Prerequisite Span. 107-109.

Lectures, a limited amount of class room work, and collateral reading of the development of thought during this period. (Stinson.)

Additional courses in Spanish may be arranged with the consent of the instructor.

ZOOLOGY AND AQUICULTURE

For Undergraduates

The courses offered by this department cover the biological requirements for entrance to the Medical School and furnish the basis for specialization in Aquiculture and other branches of Zoology.

ZOOL. 101-102. *General Zoology*—Credit at the rate of two hours per term. (Three credit hours for half year's work). Two lecture periods. First term and the first half of the second term. Repeated the latter half of the second term and the third term. Must be taken concurrently with Zool. 101a-102b.

The fundamental concepts of animal biology are stressed rather than the morphology of types. Thus the course is made broad enough to serve as a foundation to further study in any branch of the subject. Required by the Colleges of Arts and Sciences, Agriculture, Home Economics and Education.

ZOOL. 103. *A Continuation of Zool.* 101-102—Two credit hours. Two lectures. Third term. Prerequisite, 101-102. Required of pre-medical students. Must be taken concurrently with Zool. 103c.

ZOOL. 101a-102b. *General Zoology*—Credit at the rate of two hours per term. (Three credit hours for half year's work.) Two laboratory periods. First term and first half of second term. Repeated the latter half of the second term and the third term. Must be taken concurrently with Zool. 101-102.

ZOOL. 103c. *A Continuation of Zool.* 101a-102b—Two credit hours. Two laboratory periods. Third term. Prerequisite, Zool. 101a-102b. Required of Pre-Medical students. To be taken concurrently with Zool. 103.

ZOOL. 104-105. *Embryology*—Four credit hours for 104; two credit hours for 105. Two lectures and two laboratory periods for 104; two laboratory periods for 105. First and second terms. Prerequisite, Zool. 101, 101a, 102, 102b. The early stages of the frog and the development of the chick to the end of the third day will be studied.

ZOOL. 106. *Comparative Vertebrate Morphology*—Three credit hours. Two lectures and one laboratory period. Third term. Prerequisite, Zool. 101, 101a, 102, 102b.

ZOOL. 107. *Normal Animal Histology*—Three credit hours. One lecture and two laboratory periods. Prerequisite, Zool. 101, 101a, 102, 102b. Not offered in 1922-23.

For Graduates and Advanced Undergraduates

ZOOL. 110. *Aquiculture*—Credit hours, lectures and laboratory to be arranged. Prerequisites, Zool. 101-106 and Bot. 101. Plankton studies and the determination of other aquatic life of nearby streams and ponds. Morphology and ecology of representative commercial and game fishes in Maryland, the Chesapeake Blue Crab and the Oyster. (Truitt.)

For Short-Course Students

ZOOL. 1. *Animal Pests*—Three lectures. Second term. First year. A study of the wild animals of the farm with practice in identification; designed to enable farmers to recognize the beneficial and noxious animals on Maryland farms.

MUSIC

VOICE

Courses in Voice Culture are offered, covering a thorough and comprehensive study of tone production, based on the Italian method of singing.

The work required to develop a singer is begun with the most fundamental principles of correct breathing. Scale and arpeggio exercises, and all intervals, the portamento, legato, and staccato, and trill, and other embellishments to develop the technique of singing are studied through the medium of vocal exercises arranged by the greatest authorities on the voice, under the careful supervision of the instructor.

The study of songs and ballads is adapted to the ability and requirements of each singer, a thorough training being given in diction and phrasing, through the medium of sacred and secular ballads, leading to the Oratorio and Opera.

Opportunities are offered all voice pupils who are capable, to make public appearances in the regular pupils' recitals, as well as in the churches of the community.

Tuition

One lesson per week, term of twelve weeks.....$30
Two lessons per week, term of twelve weeks.....$50

Chorus

Membership in the Chorus is free to all students, and to persons residing in the community. One trimester credit for the year is awarded to students for faithful attendance at weekly rehearsals and participation in public concerts. Standard part-songs and oratorios are studied. One rehearsal each week.

Glee Clubs

A Men's Glee Club and a Women's Glee Club, both of limited membership, are recruited from the best vocal talent in the University. Admission is gained through tests, or "try-outs," conducted at the beginning of the school year. Public concerts are given by both organizations. Each club holds two rehearsals each week.

Military Band

This organization, of limited membership, is a part of the Military organization of the University, and is subject to the restrictions and discipline of the Department of Military Science and Tactics, but the direction of its work is under the Department of Musicians.

PIANO

Elementary Piano Courses. Work for beginners, based on the Leschetizky method.

Advanced Piano Courses. The college work in Piano presupposes three years of preparatory study of the piano, part or all of which may be taken at the University.

Lessons are taken twice a week. A four-year college course as follows:

First Year—Leschetizky technic, Bach Two-part Invention; Heller Etudes, Sonatas of Haydn, Mozart, and Beethoven; selections from classic and modern composers.

Second Year—Bach Three-part Inventions; concertos by classic masters; Jensen Etudes; selections from classic, romantic and modern composers.

Third Year—Leschetizky technic; Moscheles Etudes; Chopin Preludes and Waltzes; Bach Well-Tempered Clavichord; Mendelssohn concertos; Beethoven sonatas; selections from romantic and modern composers.

Fourth Year—Leschetizky technic; Chopin Etudes; Bach Well-Tempered Clavichord; sonatas and concertos by Grieg, McDowell, Schutt, Beethoven, etc., concert pieces by modern and romantic composers.

Tuition (for Elementary Piano Courses)

One lesson per week, term of twelve weeks.....$12
Two lessons per week, term of twelve weeks..... 24

Note.—Music tuitions are due in advance. 10% is added to all tuitions not paid in advance.

PHYSICS

PHYSICS 101-103. *Arts Physics*—Four credit hours each term. Three recitations. One laboratory period. Three terms. Prerequisite, Math. 107. (Students of Pre-Medical curriculum will take one additional laboratory period each week.)

A discussion in the class room and application in the laboratory of the laws governing the physical phenomena in Mechanics, Heat, Magnetism, Electricity, Light and Sound. Required of students in the Pre-Medical curriculum. Elective for other students.

PHYSICS 104-106. *Engineering Physics*—Five credit hours each term. Four recitations. One laboratory period. Three terms. Prerequisite Math. 101.

Laws and theories pertaining to Mechanics, Heat, Magnetism, Electricity, Light and Sound, with special reference to the problems which concern engineering, are discussed in the lecture room and applied in the laboratory. Required of all students in Engineering and Chemistry. Elective for other students. (In the third term the students in Chemistry are given a special course in Heat and Light, Physics 103c, instead of the course given to the engineering students.)

PHYSICS 107-108. *Special Applications of Physics*—Three credit hours each term. Three lectures. First and second terms.

Mechanics and Heat—A discussion of the laws and theories of the mechanics of solids and fluids and of heat, as applicable to the problems of the students in Agriculture.

Electricity—A practical course in Electricity and its application to the needs of the agriculturist.

Required of students in Agriculture and Home Economics.

PHYSICS 109-111. *Advanced Physics*—Three or four credit hours each term. Three lectures. Laboratory to be arranged.

A discussion of the phenomena in Physical Optics, Spectroscopy, Conduction of Electricity through Gases, Radioactivity.

Elective for students who have completed Physics 101-103, or 104-106.

PUBLIC SPEAKING

P. S. 101-103. *Reading and Speaking*—One credit hour each term. Three terms. Freshman year.

A practical course in delivery. The principles and technique of vocal expression; enunciation, emphasis, inflection, force, gesture, and general delivery. Delivery of oratorical selections by students before the class, with criticism and suggestions by instructor. Delivery of original speeches. Individual drill by appointment with instructor.

P. S. 104-106. *Oratory*—One credit hour for each term. Three terms. Open to students who have credit for P. S. 101-103

The rhetoric of oral discourse. The speech for the occasion. Study of oratorical masterpieces. Practice in the writing and delivery of orations and general speeches and addresses.

P. S. 107-109. *Extempore Speaking*—One credit hour each term. Three terms. Open to all students.

Theory and methods. The psychology of public speaking. Class exercises in speaking extemporaneously on assigned topics.

P. S. 110-112. *Debate*—One credit hour each term. Three terms. Open to students who have credit for P. S. 101-103.

A study of the principles of argumentation. Study of masterpieces in argumentative oratory. Class exercises in debating.

P. S. 113-115. *Oral Reading*—Two credit hours each term. Three terms. Open to all students.

Primarily for students intending to be teachers. Study of the technique of vocal expression. The oral interpretation of literary masterpieces. Study of methods of teaching oral reading in the schools.

P. S. 116-118. *Oral Technical English*—Three credit hours each term. Three terms.

The preparation and delivery of lectures, speeches, reports, etc., on technical subjects. All composition required in the preparation of much of the above technical matter is criticized and corrected before the oral delivery. For Engineering students only.

P. S. 119-121. *Advanced Oral Technical English*—Three credit hours each term. Three terms.

A continuation of P. S. 116-118. For Engineering students only.

MATHEMATICS

MATH. 101. *Trigonometry*—Five credit hours. Five lectures. First term.

Plane and Spherical Trigonometry. Deduction of formulas and their application to the solution of triangles, trigonometric equations, etc. Required of students in Engineering who have offered Solid Geometry for entrance.

MATH. 102. *Solid Geometry and Spherical Trigonometry*—Five credit hours. Five lectures. First term.

In this course emphasis is placed on the relation of the subject to descriptive geometry and on areas and volumes of solids. The latter portion of the time is devoted to spherical trigonometry. Required of Engineering students who have offered Plane Trigonometry for entrance. Elective for other students.

MATH. 103. *Analytic Geometry*—Five credit hours each term. Five lectures. Second and third terms. Prerequisites, Math. 101 and 102.

Geometry of two and three dimensions, loci of equations of second degree, higher plane curves, etc. Required of students in Engineering.

MATH. 104. *Advanced Algebra and Elements of Calculus*—Five credit hours. Five lectures. First term.

Algebra beyond that required for admission. Elementary theory of equations, partial fractions, permutations, elementary differentiation, etc. Required of Engineering students.

MATH. 105. *Calculus*—Five credit hours each term. Five lectures. Second and third terms. Prerequisite, Math. 103 and 104.

A discussion of the methods used in differentiation and integration and the application of these methods in determining maxima and minima, areas, volumes, moments of inertia, etc. Required of Engineering students.

MATH. 106. *Algebra*—Three credit hours. Three lectures. First term.

Quadratic equations, simultaneous quadratic equations, progressions, graphs, logarithms, etc. Required of students in the Chemistry, Liberal Arts, and Pre-medical courses.

MATH. 107. *Advanced Algebra*—Three credit hours. Three lectures. First term.

Elementary theory of equations, partial fractions, permutations, combinations, etc. Required of students in Chemistry, Liberal Arts, and Pre-medical courses who have had the equivalent of Math. 106.

MATH. 108. *Plane Trigonometry*—Three credit hours. Three lectures. Second term.

Trigonometric functions. Development of formulas and their application to the solution of trigonometric equations and oblique triangles. Required of students in the Chemistry, Liberal Arts and Pre-medical courses.

MATH. 109. *Plane Analytic Geometry*—Three credit hours. Three lectures. Third term. Prerequisites, Math. 106 or 107 and 108.

A discussion of the straight line, conic sections and higher plane curves. Required of students in the Chemistry, Liberal Arts and Pre-medical courses.

MATH. 110. *Plane Analytic Geometry*—Three credit hours. Three lectures. First term.

A continuation of Math. 109. Required of students in Chemistry.

MATH. 111. *Calculus*—Three credit hours each term. Three lectures. Second and third term. Prerequisite, Math. 110.

A general course in differential and integral Calculus particularly adapted to the needs of the students in Chemistry.

MATH. 112. *Solid Geometry*—Three credit hours. Three lectures. Third term.

A course in Geometry similar to Math. 102. Elective.

MATH. 113. *Differential Equations*—Three credit hours. Three lectures. Second term. Prerequisite, Math. 105.

The solution of the simpler differential equations is discussed. Elective.

MATH. 114. *Least Squares*—Two credit hours. Two lectures. Third term.

A short course in which stress is laid on the application to geodesy. Elective.

MATH. 115. *Astronomy*—Three credit hours. Three lectures. Second term. Prerequisite, Math. 108.

A course in descriptive astronomy. Elective.

LIBRARY SCIENCE

L. S. 101. *Library Methods*—One credit hour. First term. Freshman year. Required of all students registered in the College of Arts and Sciences. Elective for others.

This course is intended to help students use the library with greater facility. Instruction will be given by lectures and by practical work with the various catalogs, indexes, and reference books. This course considers the general classification of the library according to the Dewey System. Representative works of each division are studied in combination with the use of the library catalog. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in the Agricultural Index. Book selection and a short bibliography on an assigned subject complete this course.

HISTORY AND POLITICAL SCIENCE

HISTORY

SOCIAL AND POLITICAL SCIENCE

I. *Far Eastern History, Economics and Finance*—Two credit hours each term. Second and third terms. Open to seniors.

A study of social, economic and political conditions in the Far East, with special emphasis on the economic and industrial development of China and Siberia, and on the relations of the countries of the Far East with the United States and other Western Nations.

II. *Diplomatic and Consular Procedure in Connection With American Interests Abroad*—Two credit hours each term. Second and third terms. Open to seniors.

The functions of Consular and Diplomatic Officers of the United States in connection with our foreign relations, with particular emphasis on the economic investigational and trade promotion services of these officers; notorial and quasi-legal, public health, and other routine consular functions. Comparisons made with consular and diplomatic practices of other countries.

III. *Principles and Practices of International Trade*—Two credit hours each term. Second and third terms. Open to juniors and seniors. Prerequisites, Econ. 101 and/or Econ. 106.

Commercial and Trade relations of the United States with foreign countries; the forces governing the import and export markets; the geographical, social and economic factors affecting commercial development and expansion; the mechanism of international exchange and the financing of foreign trade.

IV. *American Social Conditions*—Three credit hours each term. Second and third terms. Open to juniors and seniors.

A study of contemporary society in the United States, dealing with its economic organization, the family institution, and the place of religion and education in modern society.

V. *Economic Resources of the United States*—Two credit hours each term. Second and third terms. Open to sophomores and elective for upper classes. Prerequisite, Econ. 101, or may be taken concurrently.

A study of the growth of agriculture, industry, manufactures, commerce, transportation and population in the United States, with emphasis on the commercial and export possibilities of our national resources. Special attention given to the resources of Maryland.

VI. *Foreign Markets for American Products*—Two credit hours. Third term. (Omitted, 1922-23.)

A continuation of the study of the economic resources of the United States dealing with the disposition of our export products.

VII. *Social Surveys in Theory and Practice*—Two credit hours each term. (Omitted 1922-23.)

A seminar course for advanced undergraduates and graduates in Applied Social Science. Laboratory work in making actual surveys of Maryland communities.

Pol. Sci. 101-103. *Government of the United States*—Three credit hours each term. Not open to freshmen.

A study of the Government of the United States. Evolution of the Federal Constitution; functions of the Federal Government. Lectures and Recitations.

Pol. Sci. 106 107. *Constitutional Law and History of the United States*—Two credit hours, first and second terms. Prerequisites Pol. Sci. 101-103.

A study of the American Constitution and its interpretation based upon the decisions of the Supreme Court.

Pol. Sci. 109. *Governments of Europe*—Two credit hours, third term. Prerequisites Pol. Sci. 101-103 and 106.

A rapid survey and comparative study of the political organization of the principal states of Europe. Classification of forms, separation of powers; sovereignty. Lectures and Recitations.

Pol. Sc. 111. *American Municipal Government*—Two credit hours, first term. Alternates with Pol. Sci. 106. Prerequisites as for Pol. Sci. 109. Not given 1922-23

A study of American City Government; organization and administration; city manager and commission plans; initiative, referendum, and recall.

Pol. Sci. 113-114. *American Diplomacy*—Two credit hours, second and third terms. Alternates with International Law. Prerequisites 104-106 and H 109-111. Not given 1922-23.

Pol. Sci. 116-117. *International Law*—Three credit hours. Second and third terms. Alternates with American Diplomacy.

A study of the nature and sources of International Law. Rights and Duties of States. Freedom of the Seas. Lectures and cases. Not given 1922-23.

Pol. Sci. 119. *Political Parties*—Three credit hours, second term. Alternates wtih Political Science 102. Prerequisites Pol. Sci. 101.

The devolpment and growth of American Political Parties, Party Machinery. Lectures and recitations. Not given 1922-23.

ECONOMICS

Econ. 101-103. *Elements of Economics*—Three credit hours each term. Not open to freshmen, but required of students who elect to major in this department.

Elementary phases of the present system; production, exchange, distribution and consumption of wealth; the monetary system; public finance; land and labor problems; monopolies, taxation and other similar topics.

Econ. 104. *Money and Banking*—Three credit hours. Second term. Prerequisite Econ. 101.

A study of the nature and functions of money; standards of value and prices; credit; bank clearings and exchanges; history of American and foreign banking; the stock exchange and the money market.

Econ. 105. *Public Finance and Taxation*—Three credit hours. Third term. Prerequisite, Econ. 101.

A study of the public expenditures, receipts, indebtedness and financial administration; theories on public expenditures; theories of taxation; the growth and nature of public credit; the forms of public debts; federal, state and municipal budgets.

Econ. 106. *Economic History of the United States*—Three credit hours. First term.

A study of the growth of industry, agriculture, commerce; transportation from the simple isolated communities of the early colonies to the complex industrial and commercial society of today; its effect on the population in terms of successive new adaptations.

Econ. 107. *Markets and Marketing*—Three credit hours. Third term.

An effort to understand the precise ways in which existing systems of marketing operate and their historical development; evidence that certain old systems fail to meet the present needs fully, and that new conditions require new adjustments. Study of the methods of auction, direct selling, cooperative buying and selling, and the direct and indirect service of governmental agency.

Econ. 108. *Corporation Finance*—Three credit hours. First term. Prerequisite, Econ. 101.

Methods employed in the promotion, capitalization, financial management, consolidation and reorganization of business corporations.

For Graduate Students

Econ. 109-112. *Advanced Theory*—Two credit hours.

By special arrangement graduate students in the University of Maryland may take this course at the American University, Washington, D. C.

Econ. 113. *Seminar*—Open to students interested in research.

SOCIOLOGY

Soc. 101-102. *Elements of Sociology*—Three credit hours each term. First and second terms.

The life of society as affected by rural conditions, cities, wealth, poverty, heredity, immigration, etc.; the nature of social organization; different phases of social evolution; problems and principles of social control.

Soc. 104. *Social Psychology*—Three credit hours. First term.

This course deals with such psychological matters as underlie the work in the field of sociology and other social sciences. The fundamental instincts as dynamic forces in the individual and in society, their development, organization and control. Analysis of the value problem.

Soc. 105. *Social Psychology*—A continuation course of Soc. 104. Three credit hours. Second term.

A psychological analysis of some main features of an organized modern state. Analysis of economic value and other social values continued.

Soc. 106. *Logical Aspects of Sociology*—Three credit hours. Third term.

This course seeks to apply the principles of logic to social phenomena. Nature of casual proof, grounds for universal judgments, statistical arguments, circumstantial evidence, analogical inference, experimental investigation, and nature and function of reasonable doubt in inductive inferences will be studied in their basic relation to actual sociological conditions. Practical problems of everyday life in their relation to the social order as discussed in the current literature and the press will furnish material for the student to test.

Soc. 109. *Ethical Aspects of Sociology*—Three credit hours. Third term.

The application of moral principles of social phenomena. Nature of moral judgments and underlying ethical concepts as illustrated in current social problems.

Soc. 103. (R. O. 104.) *Principles of Rural Organization*—Three credit hours. Third term.

A study of the historical and comparative development of farmers' co-operative organizations, stressing particularly present tendencies.

Problems of rural life in the light of modern social science; federal and state organizations intended to promote rural welfare; purpose and achievements of such voluntary organizations as the Grange, the Farmers' Union, village improvement associations, boys' and girls' clubs, co-operative societies, etc.

COMMERCE

Com. 101-103. *Constructive Accountancy*—Three credit hours each term.

The fundamental principles of single and double entry bookkeeping; subsidiary records and controlling accounts; partnership accounts and adjustments; corporation accounts; types of stocks and bonds; sinking funds; voucher system; manufacturing accounts. Preparation of balance sheet.

Com. 104-106. *Advanced Accountancy*—Three credit hours each term.

Statement of affairs and Deficiency Accounts; realization and liquidation statements; valuation of assets; operating and other statements; executor's and administrator's accounts; corporate organization and dissolution. Auditing. Income discussion and solution of C. P. A. problems taken from the various state examinations.

Com. 107-109. *Commercial Mathematics*—Three credit hours each term.

Counting-house mathematics. Use of logarithms, slide rule, comptometer, and other standard calculating devices; problems relating to sinking funds, depreciation, and annuities; elements of statistical methods.

Com. 110-112. *Business Law*—Three credit hours each term.

The aim of this course is to train students for practical business affairs by giving the legal information necessary to prevent common business errors. The following are some of the phases of the work: Requisites and forms of contracts and remedies for their breach; sales, passages of title, warranties; negotiable instruments, assignment, and liability of signers; agency, title, abstracts, mortgages, leases, etc.

Com. 113. *Business Organization*—Three credit hours.

An introductory course in the fundamentals of business organization. Different types of business. Methods of control. Selection of location and determination of products to be handled. Business policies. The application of principles to the solution of specific problems.

Com. 114. *Business Management*—Three credit hours.

The internal organization of the business for securing efficiency; departmental organization and co-ordination; advertising; salesmanship; office organization.

Com. 115. *Industrial Management*—Three credit hours.

The problems and principles of factory organization. Tayler system of Scientific management. Cost records. Methods of wage payments. Distribution of overhead. Time and motion studies.

Com. 116. *Practicum*—Three credit hours.

Study of a leading trade journal. Prerequisite, Econ. 101.

Com. 117. *Geography of Commerce*—Three credit hours.

A study of the various countries of the world with reference to raw materials, agricultural products, markets, trade routes, transportation systems, and industrial development.

Com. 118. *Principles of Foreign Trade*—Three credit hours.

A general survey of the principles of the foreign trade of the United States. Methods of shipping and marketing. Trade practices and customs. Foreign exchange.

HISTORY

H. 101-103. *Current History*—One credit hour each term. Maximum number of credit hours may not exceed six for the College course.

H. 104. *American Colonial History*—Two credit hours. First term. Not open to freshmen. Lectures and assignments.

A study of the political, economic and social conditions of the American Colonies from the settlement at Jamestown to the adoption of the Constitution.

H. 105. *American Civil War*—Two credit hours. Second term. Not open to Freshmen. Lectures and assignments.

A study of the causes of the Civil War.

H. 106. *Development of American Nationality*—Two credit hours. Third term. Not open to freshmen. Lectures and assignments. Alternates every

other year with the third term of American Diplomacy for students majoring in History and Political Science.

H. 109-111. *Modern and Contemporary European History*—Three credit hours each term. Lectures and assignments. Freshmen.

The object of the course is to acquaint freshmen with the chief events in World History during the Modern period. The lectures are so arranged as to present a comparative and contrastive view of the most important occurrences during the period covered.

H. 112. *Imperialism and World Politics*—Two credit hours. Second term. Not open to freshmen.

A study of the political development of Europe, Canada, the United States, and South America. Colonial Expansion. League of Nations. Lectures and assignments. Alternates with H. 105. Not given during 1922-23.

H. 114. *The Far East*—Two credit hours. Third term. Not open to freshmen.

A study of the principal events in the development of the Far East. Alternates with H. 106. Not given during 1922-23.

GENERAL BOTANY

Description of Courses

GEN. BOT. 101-102. *General Botany*—Credit at the rate of four hours per term. (Six credit hours for half year's work.) Two lectures and two laboratory periods. Freshman year.

General introduction to botany, touching briefly on all phases of the subject and planned to give the fundamental prerequisites for study in the special departments.

GEN. BOT. 103. *Systematic Botany*—Three credit hours: one lecture and two laboratory periods. Third term. Prerequisite, General Botany 101-102.

A study of the local flora. A study is made of floral parts and the essential relations between the groups of flowering plants. Students become familiar with the systematic key used to identify plants.

GEN. BOT. 104.. *Plant Anatomy*—Three credit hours: two lectures and one laboratory period. First term. Sophomore year. Prerequisite, General Botany 101-102.

An anatomical study of leaves, stems, roots, flowers, and fruits. Where possible, plants economically or otherwise of most interest are used as types for study.

GEN. BOT. 105-107. *Plant Morphology*—Four credit hours each term. Junior year. Prerequisite, General Bot. 101-102.

A course designed to give the student a comprehensive view of the plant kingdom. It treats of the general morphological evolutionary development and relationships of the various groups of plants based upon the examinations of selected types from each group.

GEN. BOT. 108. *Mycology*—Three credit hours: two lectures and one laboratory period. Third term. Junior year.

Introductory comparative study of the morphology, life history, and classification of economic fungi.

For Advanced Undergraduates and Graduates

GEN. BOT. 109. *Methods in Plant Histology*—Three credit hours: one lecture and two laboratory periods. Second term. Prerequisite, Gen. Bot. 104.

Primarily a study in technique. It includes methods of killing, fixing, imbedding, sectioning, straining, and mounting on slides of plant materials.

GEN. BOT. 110. *Cytology*—Three credit hours: one lecture and two laboratory periods. Second term. Prerequisite, Gen. Bot. 109.

The structure and life history of the plant cell.

GEN. BOT. 111. *Advanced Taxonomy*—Three credit hours: one lecture and two laboratory periods. First term.

The course is offered for students who want more proficiency in systematic botany than the elementary course affords. A student who completes the course should be able to classify the grasses and other common plants of the state.

For Graduate Students

GEN. BOT. 201. *Advanced Mycology*—Two credit hours each term. One lecture and one laboratory period.

A detailed treatment of the classification, morphology and economics of the fungi, with studies of life histories in culture and identification of field material.

GEN. BOT. 202. *Special Studies of Fungi*—Credit hours according to work done.

Special problems in the structure or life history of fungi or the monographic study of some group of fungi.

CHEMISTRY

INORGANIC CHEMISTRY

INORG. CHEM. A. 101-103. *General Chemistry and Qualitative Analysis*—Four credit hours each term: two lectures and two laboratory periods. The year.

A study of the non-metals and metals, the latter being studied from a qualitative standpoint. One of the main purposes of the course is to develop original work, clear thinking, and keen observation. This is accomplished by the project-method of teaching.

Course A is intended for students who have never studied chemistry, or have passed their high school chemistry with a grade of less than A.

Iorg. Chem. B. 101-103. *General Chemistry and Qualitative Analysis*—Four credit hours each term: two lectures and two laboratory periods. The year.

This course covers much the same ground as Inorg. Chem. A. 101-103 except the subject matter is taken up in more detail with emphasis on Chemical theory and important generalization. The first term of laboratory deals with fundamental principles, the second term takes up the preparation and purification of compounds and the third term deals with a systematic qualitative analysis of the more common bases and acids.

Course B is intended for students who have passed an approved high school chemistry course with a grade of not less than A.

Organic Chemistry

Org. Chem. 101-102—Four credit hours each term: two lectures and two laboratory periods. The first and second term. Prerequisites, Inorganic Chemistry A or B 101-103.

A study of the aliphatic and aromatic compounds. The course is designed primarily for premedical students.

Org. Chem. 103-104—Three credit hours each term: two lectures and one laboratory period. The first and second terms. Prerequisites, Inorg. Chem A or B 101-103.

This course is designed primarily for agricultural students.

Org. Chem. 105-107—Four credit hours each term: two lectures and two laboratory periods. The year. Prerequisites, Inorg. Chem. A or B 101-103.

This course is particularly designed for students taking chemistry as a major, and offers a detailed study of the typical organic compounds.

For Graduates

Org. Chem. 201-203. *Advanced Organic Chemistry*—Three credit hours, two lectures, and assigned laboratory work. The year. Prerequisites, Inorg. Chem. A or B 101-103, and Org. Chem. 105-107.

A more advanced treatment of the aliphatic and aromatic compounds, with special emphasis on the most recent theories of structure and reactions.

Physical Chemistry

For Graduates and Advanced Undergraduates

Phys. Chem. 101-102. *Elements of Physical Chemistry*—Three credit hours each term: two lectures and one laboratory period. The first and second terms. Prerequisites, Inorg. Chem. A or B 101-103, Physics 101-103. Math. 110 recommended.

The course will present the portions of Physical Chemistry which are necessary to every chemist, student of medicine, bacteriologist, or teacher of chemistry, with laboratory practice in thermometry and temperature regulation; physical constants; molecular weight determinations; velocity

of reactions; chemical equilibrium and law of mass action; measurements of conductivity; migration of ions; hydrogen ion concentration, etc. (Gordon).

Phys. Chem. 103. *Elements of Colloidal Chemistry*—Three credit hours; two lectures and one laboratory period. The third term. Prerequisites, Physical Chem. 101-102.

Preparation of colloids: Dialysis and ultra-filtration; optical properties and Brownin movement. Precipitation of colloids; cataphoresis and electro-endosmosis; viscosity and surface tension. Absorption; application of colloid chemistry. (Gordon.)

Phys. Chem. 104-105. *Physical Chemistry*—Three credit hours each term: two lectures and one laboratory periods. The first and second terms. Prerequisites, Phys. Chem. 101-102, Physical Chem. 103.

A study of the more advanced theories of physical chemistry with laboratory practice in the more technical physico-chemical measurements. (Gordon.)

Phys. Chem. 106. *Electrochemistry*—Three credit hours: two lectures and one laboratory period. The third term. Prerequisites, Phys. Chem. 104-105.

Various factors which govern the action of electrolytes when subject to the action of the electric current and the factors which determined electromotive force are taken up. (Gordon.)

For Graduates

Phys. Chem. 201-203. *Thermodynamics*—Three credit hours each term: two lectures and one laboratory period. The year. Prerequisites, Phys. Chem. 201-202, Phys. Chem. 203. (Gordon.)

Designed for graduate students who wish an advanced mathematical treatment of chemical phenomena. Mellor's chemical statics and dynamics will be applied to Lewis' system of Physical Chemistry. (Gordon.)

Phys. Chem. 204-206. *Colloidal Chemistry*—Three credit hours: two lectures and one laboratory period. The year. Prerequisites, Phys. Chem. 101-102, Phys. Chem. 103. (Gordon.)

Special topics will be taken up with emphasis on the most recent theories and research going on in colloid chemistry at the present time. (Gordon.)

Phys. Chem. 207. *Research in Physical Chemistry.*

Physical chemistry problems for investigation will be assigned to graduate students who wish to gain an advanced degree in chemistry. (Gordon.)

Analytical Chemistry

Analytical Chem. 101. *Advanced Qualitative Analysis*—Three credit hours: three laboratory periods. The first term. Prerequisites, Chem. A or B 101-103. An advanced course in Qualitative Analysis for students in chemistry.

ANALYTICAL CHEM. 102-103. *Quantitative Analysis*—Three credit hours each term: three laboratory periods. Second and third terms. Prerequisites, Inorg. Chem. 101-103, Analytical Chem. 101.

The principal operations of gravimetric analysis. Standardization of chemical balance. Standardization of weights and apparatus used in chemical analysis.

ANALYTICAL CHEM. 104-105. *Quantitative Analysis*—Three credit hours each term: one lecture and two laboratory periods. First and second terms. Prerequisites, Analytical Chem. 102-103.

Principal operations of volumetric analysis. Standardization of chemical glassware. Study of indicators, typical volumetric and colormetric methods.

ANALYTICAL CHEM. 106. *Chemical Calculations*—One credit hour. First and second terms. Prerequisites, Inorg. Chem. 101-103.

Chemical problems relating to Analytical Chemistry.

Analytical Chem. 107. Quantitative Analysis. Three credit hours: three laboratory periods. The third term. Prerequisites, Inorg. Chem. 101-103.

Quantitative Analysis for premedical students with special reference to volumetric methods.

ANALYTICAL CHEM. 108. *Determinative Mineralogy and Assaying*—Three credit hours: one lecture and two laboratory periods. Third term. Prerequisites, Inorg. Chem. 101-103.

The more important minerals are identified by their characteristic physical and chemical properties. Assays of gold, silver, copper and lead are made.

For Graduates and Advanced Undergraduates

ANALYTICAL CHEM. 201-203. *Advanced Quantitative Analysis* — Four credit hours each term: two lecture and two laboratory periods. Prerequisites, Inorg. Chem. 101-103, Analytical Chem. 101-106. (Wiley.)

A continuation of courses 102-3-104-5.

INDUSTRIAL CHEMISTRY

IND. CHEM. 101. *Agricultural Chemistry*—Four credit hours: three lectures and one laboratory period. Third term. Prerequisites, Inorg. Chem. 101-103

Lectures, recitations and laboratory in the chemistry of air, soils, feeds, fertilizers, plants and animals.

IND. CHEM. 102-103. *Agricultural Analysis*—Three credit hours each term: one lecture and two laboratory periods. Second and third terms. Prerequisites, Inorg. Chem. 101-103.

Quantitative Analysis and its application to agricultural products, including gravimetric and volumetric methods.

IND. CHEM. 104. *Engineering Chemistry*—One credit hour each term: the year. Prerequisites, Inorg. Chem. A or B 103.

A lecture course dealing with the value of fuels, coal, oils and gases, from their chemical analysis The significance of flue gas analysis. Comparison of specifications, particularly chemical requirements of various states, manufacturers and large corporations for fuels, lubricating oils and paints. This course is given primarily for students in engineering.

IND. CHEM. 105. *Chemistry Textiles*—Three credit hours: two lectures and one laboratory period. The third term. Prerequisites, Inorg. Chem. A or B 101-103. Org. Chem. 103-104.

The study of the principal textile fibers. Their chemical and mechanical structure. Chemical methods are given for identifying the various fibers, dyes and mordants.

IND. CHEM. 106-107. *The Chemistry of Food and Nutrition*—Three credit hours: two lectures and one laboratory period. First and second terms. Prerequisites, Inorg. Chem. A or B 101-103, Org. Chem. 103-104.

The purpose of this course is to present the principles of the chemistry of food and nutrition with special reference to the food requirements of man and the considerations which should underlie the nutritive values of foods.

For Graduates and Advanced Undergraduates

IND. CHEM. 108-110. *Advanced Agricultural Chemistry*—Four credit hours each term: two lectures and two laboratory periods. The year. Prerequisites, Inorg. Chem. A or B 101-103, Org. Chem. 103-104.

This course is so arranged that the chemistry of soils and soil analysis is given in the first term, the plant and plant analysis in the second term, and the study of animal and animal products in the third term. (Broughton.)

IND. CHEM. 111-113. *Plant Analysis*—Three credit hours each term: one lecture and two laboratory periods. The year. Prerequisites, Inorg. Chem. A or B 101-103, Org. Chem. 103-104.

A discussion and the application of the analytical methods used in determining the inorganic and organic plant constituents. (Broughton.)

IND. CHEM. 114-116. *Metallurgical Calculations*—One credit hour each term: The year. Prerequisites, Inorg. Chem. 101-103, Analytical Chem. 102-103, 104-105.

Problems embodying the use of physical, chemical and mechanical principles utilized in practical metallurgy. (Broughton.)

IND. CHEM. 117,119. *Metallurgical Analysis*—Two credit hours each term. The year. Prerequisites, Inorg. Chem. 101-103, Analytical Chem. 101-105.

Analysis of industrial ores and alloys, fuels, oils and gases. (Broughton.)

IND. CHEM. 120-122. *Industrial Chemistry*—Two credit hours each term: The year. Prerequisites, Inorg. Chem. 101-103.

A thorough course of the practical methods employed in the various Inorganic and Organic chemical industries. (Broughton.)

For Short-Course Students

IND. CHEM. 1. *Agricultural Chemistry*—Two lectures and one laboratory period. First and second terms.

This course consists of an elementary study of general chemistry with special reference to the chemistry of plants, animals, soils, fertilizers, etc.

FERTILIZER AND FOOD CHEMISTRY

Dr. H. B. McDonnell has charge of the State's inspection work including sampling, analysis, and the publication of results on fertilizers, stock food, and agricultural lime.

SEMINAR

One credit hour. The year. During these periods there is a discussion of the latest bulletins and scientific papers on all phases of Chemistry, by the graduate students and chemistry staff.

ANCIENT LANGUAGES AND PHILOSOPHY

GREEK

Gk. 1-3. *Beginners' Greek*—Three credit hours each term. Three terms.

Drill and practice upon the fundamentals of Greek grammar and the acquisition of a vocabulary. To be followed by Gk. 101-103.

GK. 101-103. *Greek Grammar, Composition, and Translation of Selected Prose Works*—Three credit hours each term. Three terms. Second year course. Prerequisite, Gk. 1-3.

This course is for those who offer two units in Greek for entrance.

GK. 104-106. *Greek Literature and Composition*—Three credit hours each term Three terms. Prerequisite, Gk. 101-103.

Study and translation of Greek prose and lyric poetry.

GK. 107-109. *Greek Drama*—Three credit hours each term. Three terms. Prerequisite, Gk. 104-106.

A study of the qualities of Greek dramatic poetry and comedy. Translation of representative selections.

LATIN

LAT. 101-103. *Translation, Prosody, Mythology*—Three credit hours each term. Three terms.

Study and translation of selections from Virgil, together with a study of his life and influence.

This course may be offered for entrance or may be taken as college work by those who offer only two units of Latin for entrance.

LAT. 104-106. *Latin Grammar, Composition, and Translation* — Three credit hours each term. Three terms.

Review of Latin Grammar. Much practice in prose composition. Translation of selections from Livy, Cicero, and Sallust.

This course is for those who offer four units in Latin at entrance.

LAT. 107-109. *Latin Drama*—Three credit hours each term. Three terms. Prerequisite, Lat. 104-106 or the equivalent.

Critical study of selected plays of Plaitus and Terence

LAT. 110-112. *History of Roman Literature*—Three credit hours each term. Three terms. Prerequisite, Lat. 107-109.

Lectures, translation of representative works, and collateral reading.

PHILOSOPHY

For Advaced Undergraduates

PHIL. 101. *Introduction to Philosophy*—Three credit hours. First term. Junior standing required.

A study of the meaning and scope of philosophy; its relations to the arts, sciences, and religion. To be followed by Phil. 102-103.

PHIL. 102-103. *Problems and Systems of Philosophy* — Three credit hours. Second and third terms. Prerequisite, Phil. 101.

Study of the problems and systems of philosophy together with tendencies of present-day thought. Lectures and reports on the reading of representative works.

PHIL. 104-106. *History of Philosophy*—Three credit hours. Three terms. Senior standing required.

A study of the development of philosophy from prehistoric times, through Greek philosophy, early Christian philosophy, mediæval philosophy to modern philosophical thought. Lectures and reports on outside reading.

The School of Dentistry

Faculty of the School of Dentistry

T. O. HEATWOLE, Dean.

T. O. HEATWOLE, M.D., D.D.S.
Professor of Dental Materia Medica and Therapeutics.
ALEXANDER HORN PATERSON, D.D.S.
Professor of Prosthesis and Technics.
J. EDGAR ORRISON, D.D.S.
Professor of Operative Dentistry, Dental Anatomy and Technics.
B. MERRILL HOPKINSON, A.M., M.D., D.D.S.
Professor of Oral Hygiene and Oral History.
HOWARD LEE HURST, D.D.S.
Professor of Exodontia and Local Anaesthesia.
NEIL E. GORDON, Ph.D.
Professor of Chemistry.
ROBERT P. BAY, M.D.,
Professor of Oral Surgery and Physical Diagnosis.
ROBERT L. MITCHELL, Phar.G., M.D.
Professor of Bacteriology and Pathology.
HOWARD J. MALDEIS, M.D.
Professor of Histology and Embryology.
J. LEROY WRIGHT, M.D.
Professor of Anatomy and Biology.
OREN H. GAVER, D.D.S.
Professor of Physiology and Infirmary Chief.
MAGNUS B. MILNER, D.D.S.
Professor of Orthodontia.
ALLIE Y. RUSSELL, D.D.S.
Professor of Crown and Bridgework, Instructor of X-Ray and Associate Professor of Prosthetic Dentistry.
E. FRANK KELLY, Phar.D.
L. B. BROUGHTON, M.S.
Associate Professors of Chemistry and Metallurgy.
J. C. KRANTZ, JR., Ph.C.
Instructor in Physics and Associate Professor of Chemistry.
GEORGE S. KOSHI, D.D.S.
Instructor of Crown and Bridge Technics and Clinic.
D. EDGAR FAY, M.D.
Associate Professor of Physical Diagnosis.
NEIL E. THALAKER, D.D.S.
Instructor of Exodontia.

CARL J. STERN, D.D.S.
Instructor of Operative Technics and Clinical Assistant.
F. G. GARCIA, D.D.S.
Instructor of Dental Anatomy Technics and Clinical Assistant.
H. L. CAPLES, A.M.
Professor of English.
SAMUEL P. PLATT
Instructor of Mechanical Drawing.
ADALBERT ZELWIS, A.M., D.D.S.
GERALD I. BRANDON, D.D.S.
Assistants in Prosthetic Technics.

The course of instruction in the School of Dentistry of the University of Maryland covers a period of four Sessions of 32 weeks each, exclusive of holidays, in separate years.

The Forty-first Regular Session will begin October 2nd, 1922, and continue until June 1st, 1923. Full attendance during this period is demanded in order to get advancement to higher classes. Class Examinations for the Session will be held in September, January, and May.

This Department of the University of Maryland is a member, in good standing, of the National Association of Dental Faculties, and conforms to all the rules and regulations of that body.

The many men of eminence in professional, civil and social life, graduates of this institution, distributed throughout the civilized world, will amply attest to the high standard and thorough training in vogue in the past, and no effort will be lost in an attempt to keep abreast of the development in the practical scientific advancement of the profession in the future.

Aside from and independent of the Regular Session, this institution maintains a Spring and Summer Course, which follows immediately the termination of each Regular Session and continues until October 1st. This Course is intended for practical work only; no credit for time thus put in is allowed toward graduation. The many advantages of the Summer Session for actual practice cannot be overestimated, as the number of patients applying for dental services is always very large and the Infirmary is never closed except on Sundays and other holidays.

Requirements for Matriculation

The requirements for matriculation in the Dental Department of the University of Maryland are those established by the Dental Educational Council of America, viz, graduation from an accredited high school having a four-year course, or its equivalent.

Applicants for matriculation must submit their credentials for verification to the *Registrar of the University of Maryland, Baltimore, Md.*

Applicants lacking full credentials may earn same by taking a stated written examination on subjects in which they are deficient.

Attendance Requirements

In order to receive credit for a full Session, each student must have entered and be in attendance not later than ten days after the beginning and remain until the close of the Regular Session, the dates for which have been announced in the Annual Catalogue.

In case of sickness, attested by a physician's certificate, students may enter twenty days after the opening of the Regular Session.

Advanced Standing

Graduates from reputable and accredited medical colleges are admitted to the Sophomore Year and credits allowed on all subjects completed which are included in the Dental Course.

Students from other recognized dental colleges will be given credit for all work completed in the institution from which they come, except those entering for the Senior Year only. These will be required to take the work of the full Senior Course of this School.

At the close of each session, each student must pass a satisfactory examination on the several subjects of that year before he can be entered in the succeeding grade.

Requirements for Graduation

The candidate for graduation must have attended four sessions of instruction in some recognized dental college, the last year of which must have been in this institution.

He must have satisfied the requirements of each of the several instructors and proved himself proficient in the theory and practice of Dentistry.

He must have attained the age of twenty-one years and be of good moral character.

Students may matriculate by mail by sending money order, or registered letter containing the amount of fee, $5.00, to Dr. T. O. Heatwole, Dean, Corner Green and Lombard Sts., Baltimore, Md.

Fees for Each Regular Winter Course

Matriculation (paid once only), $5.00. Tuition fee, $200.00. Diploma fee, $30.00. Dissecting fee (paid once only), $15.00. Laboratory fee, $5.00.

(The Diploma Fee must be paid by the first of April of the year of graduation.)

The tuition fee may be paid as follows: One hundred dollars at the beginning of session, and balance during the first week of the succeeding February; this rule must be strictly observed.

A special ticket is issued at the close of each session to every student of the first, second and third year classes, as an evidence that he has been successful, or unsuccessful, in examinations for advancement to a higher grade, and also has attended a full session.

No assessment is made on candidates for graduation, the University bearing all the expenses attending the Commencement Exercises.

College of Education

The College of Education is an organization of the various activities of the University concerned with the preparation of individuals for positions in the educational profession. Its courses are planned to serve three classes of students: First, those preparing to teach agriculture, arts and science, home economics and industrial subjects; second, prospective principals of high schools, educational supervisors, county agents, home demonstrators, boys' and girls' club workers, and other educational specialists; third, those majoring in special fields who desire courses in education for their professional and informational value.

Degrees

Upon the completion of two hundred and four trimester hours graduates from the four-year curricula of the College of Education are awarded the degree of Bachelor of Science or Bachelor of Arts.

Teachers' Special Diplomas

The degrees granted for work done in the College of Education indicate primarily the quantity of work completed. Teachers' special diplomas certify to the professional character of such work. Teachers' special diplomas will be granted only to those who, besides qualifying for a degree, give promise of superior professional ability as evidenced by their personality, character, experience and success in supervised teaching.

Teachers' special diplomas will be granted in agricultural education, arts and science education, home economics education, manual training and industrial education.

The recipient of a teachers' special diploma is eligible for certification by the State Superintendent of Schools without examination.

Departments

The College of Education is organized into two general divisions, viz.—General Education and Vocational Education. In the main the College includes work in the following departments offering general and professional training for teachers. Agricultural Education, Arts and Science Education, Home Economics Education, and Industrial Education.

Equipment

In addition to the general facilities offered by the institution as a whole, by special arrangement with the county and state school authorities the high school located at Hyattsville within two miles of the University is used for college credit work in teaching. The observation work so necessary for efficient teacher training is conducted in Washington and in near-by Maryland schools. The nearness of these schools to the institution and the proximity of the federal offices and libraries dealing with education

provide unusual opportunities for contact with actual class-room situations and current administrative problems in education.

Curricula

Two general classes of curricula leading to the degree of Bachelor of Science and Bachelor of Arts are offered.

The first of these provides fixed curricula permitting comparatively little election for the definite purpose of preparing teachers and supervisors of agriculture, home economics, manual training, and industrial subjects. As the University of Maryland is the institution designated by the State Board of Education for the training of teachers of vocational agriculture, home economics, and trades and industries under the provisions of the Smith-Hughes vocational educational act, the curricula in this class have been organized to meet the objectives set up in the act and in the interpretations of the Federal Board for Vocational Education and the State Board of Education.

The second class provides a wide range of electives and seeks to train teachers of arts and science subjects and specialists for the profession of education. Although there are definite and fixed basic requirements, the student may choose from a number of subjects the major subject in which he expects to qualify for teaching. Correlated with this major may be other subjects which he may wish to teach.

A minimum of 30 hours in education is required as an integral part of all four-year curricula of the College of Education. This minimum includes the following: education in the United States, 3 hours; educational psychology, 5 hours; technic of teaching, 5 hours; an introductory teacher's course in the subject of specialization, 3 hours; special methods in the subject of specialization, 3 hours; principles of secondary education, 3 hours; teaching, 3 to 5 hours.

Special Courses

By special arrangement courses in education are offered evenings and Saturdays to teachers in service and to those who may desire to qualify for teaching in the schools of Maryland after having had such work. College credit may be granted for this work if taken in course. Only a limited amount of service of this kind can be undertaken. School officials should make application for this work before arranging for it in their counties.

As the need for evening classes in industrial and home economics education arises, special courses will be offered at centers throughout the state. The number and location of these centers will depend entirely upon the need and demand for such instruction. The courses will be organized on the short unit basis and will be maintained only as long as the demand justifies them. Upon the satisfactory completion of such special curricula, students will be issued certificates stating the amount and character of work done.

In summer special courses are offered for the benefit of teachers in

service and such individuals as may be able to qualify for teaching upon the completion of the work.

Teacher Training Courses Necessary for Prospective Teachers

Teacher training courses are necessary for prospective teachers, inasmuch as the State Board of Education will not certify persons to teach in the approved high schools of the state unless such persons have had adequate professional training for teaching.

Athletics and music are also valuable forms of training for the prospective teacher.

All students wishing to prepare for teaching should consult the Dean of the College of Education regarding possible combinations and the arrangement of their work. Upon matriculation each student is required to state the subjects for which he desires to prepare to teach and in the election of courses to secure the advice and approval of the head of the department in which these subjects fall. The previous training of the student, his experience, and his future needs govern the head of the department in his recommendations.

Arts and Science Education

Since the student electing this curriculum may become a candidate for either the Bachelor of Arts or the Bachelor of Science degree, he should upon his matriculation state the degree for which he wishes to qualify. Students wishing to prepare for the teaching of English, history, the social sciences, and language should become candidates for the degree of Bachelor of Arts. Those wishing to teach general and biological science, chemistry and physics should become candidates for the degree of Bachelor of Science.

Upon registration in this curriculum students should state the subjects in which they expect to qualify for teaching, designating a major and a minor interest. Candidates for the Bachelor of Arts degree must complete, in addition to the requirements of the curriculum, a minimum of nine credits in foreign language.

Students electing this curriculum may register either in the College of Education or the College of Arts and Sciences. In any case they will register with the College of Education for the special teacher's diploma.

FRESHMAN YEAR — *Term:*	*I*	*II*	*III*
Composition and Rhetoric (Eng. 101-103)	3	3	3
Language (French, German, Spanish, Latin or Greek)	3	3	3
Gen. Chem. and Qual. Anal. (Gen. Chem. 101-103)	3	3	3
Algebra (Math. 106)	3	..	..
Plane Trigonometry (Math. 107)	..	3	..
Plane Analytical Geometry (Math. 108) or Solid Geometry (Math. 111)	..	..	3
History (His. 109-111)	3	3	3
Educational Guidance (Ed. 134-136)	1	1	1
Basic R. O. T. C. (M. I. 101-103)	2	2	2

SOPHOMORE YEAR	*Term*:	*I*	*II*	*III*
Public Education in United States (Ed. 101)		3	..	..
English (Eng. 119-121)		3	3	3
Political Science (Pol. Sc. 102-103)		..	3	3
Language (French, German, Spanish, Latin or Greek)		3	3	3
Zoology (Zool. 101-102)		4	4	..
Botany (Bot. 101)		..	..	4
Sociology (Soc. 104-106)		3	3	3
R. O. T. C.		2	2	2

JUNIOR YEAR	*Term*:	*I*	*II*	*III*
Educational Psychology (Ed. 102)		5	..	..
Technic of Teaching (Ed. 103)		..	5	..
Arts and Science Education (Ed. 113, 115, 117, 119, or 121)		..	..	3
English (Eng. 104-106)		2	2	2
Reading and Speaking (Pub. Sp. 101-103)		1	1	1
Electives		9-12	9-12	9-12

SENIOR YEAR	*Term*:	*I*	*II*	*III*
Arts and Science Education (Ed. 114, 116, 118, 120 or 122)		3	..	..
Principles of Secondary Education (Ed. 124)		..	3	..
*Teaching Arts and Science Subjects (Ed. 123)		..	..	..
Electives		14-17	14-17	14-17

*Credit, three to five hours. Given any term.

Requirements for a Degree

Upon the satisfactory completion of two hundred and four trimester hours under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Arts or for the degree of Bachelor of Science, depending upon the character of the work elected.

Agricultural Education

In addition to the regular entrance requirement of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

The electives allowed by this curriculum may be selected from any of the courses offered by the University for which the student has the necessary prerequisites. A student is expected, however, to confine his elections to subjects related to farming and to teaching. Though opportunity is afforded for specialization in a particular field of agriculture, such as animal husbandry, agronomy, pomolgy, vegetable gardening, or farm management, students should arrange their work so that approximately forty per cent. of their time will have been spent on technical agriculture, twenty-five per cent. on scientific subjects, twenty per cent. on subjects of a general educational character, and from twelve to fifteen per cent. on subjects in professional education.

Students electing this curriculum may register either in the College of Education or the College of Agriculture. In either case they will register with the College of Education for the special teacher's diploma.

Agricultural Education

FRESHMAN YEAR	*Term*:	*I*	*II*	*III*
Cereal Crops (Agron. 101)		4	..	..
Animal Husbandry (An. Hus. 101)		..	4	..
Elementary Vegetable Gardening (Hort. 101)		..	..	4
Gen. Chem. and Qual. Anal. (Gen. Chem. 101-103)		4	4	4
General Zoology (Zool. 101-102)		4	4	..
General Botany (Bot. 101)		..	..	4
Composition and Rhetoric (Eng. 101-103)		3	3	3
Educational Guidance (Ed. 134-136)		1	1	1
Basic R. O. T. C. (M. I. 101)		2	2	2

SOPHOMORE YEAR	*Term*:	*I*	*II*	*III*
*Public Education in the United States (Ed. 101)		3	..	..
Elementary Pomology (Hort. 102)		4	..	..
Feeds and Feeding (An. Hus. 102A)		3	3	..
Principles of Dairying (D. H. 101)		..	..	4
Grading Farm Crops (Agron. 103)		..	3	..
Forage Crops (Agron. 102)		..	..	4
General Geology (Geol. 101)		3	..	..
Principles of Soil Management (Soils 101-102)		..	3	3
Plant Physiology (Plt. Phys. 101-102)		..	4	3
Organic Chemistry (Org. Chem. 101-102)		3	3	..
General Entomology (Ent. 101)		..	..	3
Basic R. O. T. C. (M. I. 102)		2	2	2

Note: Students who have not had a substantial course in high school physics must carry Physics during this or subsequent years.

JUNIOR YEAR	*Term*:	*I*	*II*	*III*
Educational Psychology (Ed. 102)		5	..	..
Technic of Teaching (Ed. 103)		..	5	..
Secondary Vocational Agriculture (Ed. 104)		..	..	3
Dairy Production (D. H. 102)		4	..	..
Farm Poultry (An. Hus. 104)		..	..	3
Economics (Econ. 101-102)		3	3	..
Agricultural Economics (A. E. 101)		..	..	3
Advanced Composition (Eng. 104-106)		2	2	2
Public Speaking (Pub. Sp. 101-103)		1	1	1
Electives		3-5	6-8	6-8

SENIOR YEAR	*Term:*	*I*	*II*	*III*
Problems and practice in Teaching Secondary Vocational Agriculture (Ed. 105)		3	..	..
The Rural Community and Agr. Ed. (Ed. 128)		..	3	..
*Teaching Secondary Vocational Agriculture (Ed. 106)		..	..	..
Principles of Secondary Education (Ed. 124)		..	3	..
Farm Management (F. M. 101-102)		3	3	..
Methods, Materials and Practice in Farm Shop (Ed. 140-141)		..	..	1
Electives		9-12	9-12	12-17

*Credit, three to five hours. Given any term.

Home Economics Education

In addition to the regular entrance requirement of the University, involving graduation from a standard four-year high school, students electing home economics education must present evidence of two years' experience in the home as a house daughter during which time a large share of the responsibility in the management of the home was assumed.

Students may elect from other schools such courses as they may be qualified to enter. They are expected, however, to confine their election primarily to subjects related to home-making and teaching. The curriculum should be so arranged that approximately forty per cent. of the student's time will be spent on technical home economics subjects, twenty-five per cent. on scientific subjects, twenty per cent. on subjects of general academic character, and from twelve to fifteen per cent. on subjects of a professional character.

Students electing this curriculum may register either in the College of Education or the College of Home Economics. In either case they will register with the College of Education for the special teacher's diploma.

Home Economics Education

FRESHMAN YEAR	*Term:*	*I*	*II*	*III*
Composition and Rhetoric (Eng. 101-103)		3	3	3
Gen. Inorganic Chem. and Qual. Anal. (Chem. 101-103)		4	4	4
Zoology (Zool. 101-102)		4	4	..
Botany (Bot. 101)		..	..	4
Educational Guidance (Ed. 134-136)		1	1	1
Clothing (Cloth. 101)		..	..	3
Social Psychology (Soc. 104-105)		3	3	..
Hygiene (No credit)		..	..	..
(And one of the following)				
History		3	3	3
Language		3	3	3

SOPHOMORE YEAR	*Term:*	*I*	*II*	*III*
*Public Education in the United States (Ed. 101)		3	..	..
Foods (Food 101-102)		5	..	4
Drafting and Elementary Dress Design (Cloth. 102)		..	5	..
Textiles (Tex. 101)		..	..	3
Millinery (Cloth. 103-104)		..	2	2
Art (Art 101)		3	..	..
Organic Chemistry (Org. Chem. 101-102)		3	3	..
English		..	3	3
(And one of the following)				
Language		3	3	3
Sociology		3	3	3
History		3	3	3

NOTE: Students who have not had a substantial course in high school physics must carry Physics during this or subsequent years.

JUNIOR YEAR	*Term:*	*I*	*II*	*III*
Educational Psychology (Ed 102)		5	..	..
Technic of Teaching (Ed. 103)		..	5	..
Secondary Vocational Home Economics (Ed. 107)		..	..	3
Costume and Design (Art 103)		3	..	..
Dressmaking (Cloth. 105-106)		..	3	3
Physiological Chemistry (Bio. Chem. 101)		4	..	..
Nutrition (Foods 103-104)		..	5	5
Bacteriology (Bact. 101-102)		3	3	..
Public Speaking		1	1	1
Electives		1-3	1-3	4-6

SENIOR YEAR	*Term:*	*I*	*II*	*III*
Problems and Practice in Teaching Secondary Vocational Home Economics (Ed. 108)		3	..	..
*Teaching Secondary Vocational Home Econ. (Ed. 109)		..	..	..
Principles of Secondary Education (Ed. 124)		..	3	..
Child Care and Welfare (Ed. 134)		..	..	3
History of the Family (Ed. 130)		3	..	..
Education of Women (Ed. 131)		..	3	..
Household Management (H. M. 101-102)		3	3	..
Practice House (H. M. 103)		..	..	6
Marketing and Buying (H. M. 104)		2	..	..
Arts and Handicraft		..	..	2
Electives		5-8	5-8	5-8

*Credit, three to five hours. Given any term.

Industrial Education

Three types of curricula are offered in Industrial Education, viz., a four-year curriculum, a two-year curriculum and a special curriculum. The

first two are offered as resident work at the University and the third is offered at special centers in the State where occasion demands.

Four-Year Curriculum in Indutrial Education for Teachers of Related Subjects

In addition to the regular entrance requirement of the University, involving graduation from a standard four-year high school, students electing the four-year curriculum in industrial education must be willing to engage in the trades or industries during the three summer vacations.

The electives allowed by this curriculum may be chosen from any of the courses offered in the University for which the student has the necessary prerequisites.

Two-Year Curriculum in Industrial Education for Teachers of Related Subjects

This curriculum is designed for mature students who have had considerable experience in some trade or industry.

In addition to the above, applicants for admission to this curriculum must have as a minimum requirement an elementary school education or its equivalent and must be willing to engage in the trades and industries during the summer vacation.

The curriculum will not be rigidly required as laid down, but will be made flexible, in order that it may be adjusted to the needs of students who present advanced credits for certain of the required courses.

Special Courses for Teachers of Trade and Related Trade Subjects

To meet the needs for industrial teacher training in Baltimore, two types of courses are offered of evenings in that city—one for teachers of trade subjects, the other for teachers of related trade subjects. The courses open about the last of September and close about the last of April. The class for teachers of trade subjects meets twice a week, the one for teachers of related trade subjects meets once a week. The recitation period in all cases is two hours.

Applicants for admission to these classes must have had considerable experience in the line of work they expect to teach, and must have, as a minimum requirement, an elementary school education or its equivalent. The credit allowed for these courses depends upon the amount and character of the work completed.

For teachers of trade subjects the term's work deals with the analysis and classification of trade knowledge for instructional purposes, the mechanics and technique of teaching, shop and class-room management, and the organization of industrial classes. The work for teachers of related subjects is similar to that described for teachers of trade subjects except that emphasis is placed upon the analysis of their specialties in relationship to the different trades with which they are articulated.

DESCRIPTION OF COURSES

General Education

Ed. 101. *Public Education in the United States*—Three credit hours. First term. Open to sophomores, juniors and seniors. Required of all students in Education.

The evolution of public education in the United States as the expression and promoter of democracy, emphasizing particularly vocational education and present tendencies in reorganization; recent state and federal school laws; proposed legislation.

Ed. 102. *Educational Psychology*—Five credit hours. First term. Open to juniors and seniors. Required of all juniors in Education.

General characteristics and use of original tendencies; principles of mental evolution and development; the laws and methods of learning; experiments in rate improvement; permanence and efficiency; causes and nature of individual differences; principles underlying mental tests; principles which should govern school practice.

Ed. 103. *Technic of Teaching*—Five credit hours, four lectures and one laboratory period. Second term. Open to juniors and seniors. Required of juniors in Education. Prerequisite Ed. 102.

The nature of educational objective; steps of the lesson plan; observation and critiques; survey of teaching methods; type lesons; lesson planning; class management.

Ed. 124. *Principles of Secondary Education*—Three credit hours. Second term. Required of all seniors in Education.

Evolution of secondary education, articualtion of secondary schools with the elementary school, colleges, technical schools, and the community and the home; the junior high school; programs of study and the reconstruction of curricula; the teaching staff and student activities.

Ed. 125. *Psychology of Childhood*—Three credit hours. Second term. Open to juniors and seniors. Required of juniors in Home Economics Education. Prerequisite Ed. 102.

The mental development and characteristics of children during the successive school ages stressing particularly pre-adolescence and adolescence needs.

Ed. 126-127. *History of Education*—Two credit hours. Second and Third terms. Open to juniors and seniors.

History of the evolution of educational theory; institutions; and practices.

Arts and Science Education

Ed. 113. *English in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors, required of juniors preparing to teach English. Prerequisite Ed. 103.

Objectives in English in the different types of secondary schools; selec-

tion of subject matter; state requirements and state courses of study; evaluation of the course of study in terms of modern practice and group needs.

Ed. 114. *Problems and Practice in Teaching English in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors preparing to teach English. Prerequisite Ed. 113.

Psychological principles underlying the teaching of English in secondary schools; the organization of the materials; lesson plans; devices for motivating and socializing work; special methods and type lessons in teaching the different forms of literary composition; measuring results; observation and critiques.

Ed. 115. *History and Civics in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors preparing to teach history. Prerequisite Ed. 103.

Objectives of history and civics in secondary schools; selection of subject matter; parallel readings; state requirements and state courses of study; the development of civics from the community point of view; reference books, maps, charts and other auxiliary materials.

Ed. 116. *Problems and Practice in Teaching History and Civics in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors preparing to teach history. Prerequisite Ed. 115.

Psychological principles underlying the teaching of history and civics in secondary schools; the organization of materials; lesson plans, devices for motivating and socializing work; maintenance of the citizenship objective; use of maps, charts, and note books in history teaching; checking and measuring results; observation and critiques.

Ed. 117. *Foreign Language in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors preparing to teach foreign language. Prerequisite Ed. 103.

Objectives of foreign language in secondary schools; selection of subject matter; state requirements and state courses of study; special devices and other auxiliary materials.

Ed. 118. *Problems and Practices in Teaching Foreign Language in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors preparing to teach foreign language. Prerequisite Ed. 117.

Psychological principles underlying the teaching of foreign language in the secondary schools; the organization of material for teaching; lesson plans; devices for motivating and socializing work and the use of special material and charts; observation and critiques.

Ed. 119. *Mathematics in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors preparing to teach mathematics. Prerequisite Ed. 103.

Objectives of mathematics in secondary schools; selection of subject

matter; state requirements and state courses of study; proposed reorganizations.

Ed. 120. *Problems and Practices in Teaching Mathematics in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors preparing to teach mathematics. Prerequisite Ed. 119.

Psychological principles underlying the teaching of mathematics in secondary schools; lesson plans; devices for motivating and socializing work; checking and measuring results; observation and critiques.

Ed. 121. *Science in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors preparing to teach science. Prerequisite Ed. 103.

Objectives of science in secondary schools; selection of subject matter; state requirements and state courses of study; sources of material; reference books, laboratories and equipment.

Ed. 122. *Problems and Practice in Teaching Science in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors preparing to teach science. Prerequisite Ed. 131.

Psychological principles underlying the teaching of science in secondary schools; the organization of materials for instruction; methods of the class period; lesson plans; the preparation and organization of laboratory instruction; note books.

Ed. 123. *Teaching Arts and Science Subjects*—Three to five credit hours; determined by amount and character of work done. Given any term senior year. Required of seniors preparing to teach arts and science subjects. Subject selected depends upon the student's specialty. Ed. 114 or Ed. 116 or Ed. 118 or Ed. 120 or Ed. 122 must be offered as a prerequisite to or as a parallel of this course depending upon the student's specialty.

Observation; course outline; lesson plans; class teaching; critiques.

Vocational Education

Ed. 134-136. *Educational Guidance*—One credit hour each term. Open to all freshmen. Required of freshmen in Education.

This course is designed to assist students in adjusting themselves to the demands and problems of college and professional life, and to guide them in the selection of college work during subsequent years. Among the topics discussed are the following: student finances; student welfare; intellectual ideals; recreation and athletics; general reading; student organization; student government; the purpose of the college; the election of courses and the selection of extra curriculum activities.

Ed. 137. *Theory of Vocational Education*—Three credit hours. Third term. Open to advanced undergraduates and graduate students by special arrangement.

Evolution of vocational education; educational and social forces behind the movement; terminology; types of industrial schools; technical

high schools; vocational education for girls; vocational education in rural communities; recent legislation.

Agricultural Education

Ed. 104. *Secondary Vocational Agriculture*—Three credit hours. Third term. Open to juniors and seniors. Required in Agricultural Education. Prerequisite Ed. 103.

Theory of vocational education; terminology; the vocational education law; federal and state interpretations; purposes of secondary vocational agriculture; vocational analysis and vocational needs; curriculums and short courses; analysis of farm enterprises; the classification and arrangement of farm jobs; knowledges, and skills for instructional purposes; the checking of skills; the determination of the point of attack; the home project; practice records; the important farm enterprise as the vehicle for general agricultural information; short course work and problems; the agricultural work of the last two years of a four year curriculum; farm shop.

Ed. 105. *Problems and Practice in Teaching Secondary Vocational Agriculture*—Three credit hours. One lecture and two laboratory periods. First term. Required of seniors in Agricultural Education. Prerequisite, Ed. 104.

Relation of the agricultural teacher to the school system; relation to the community; the organization and conduction of project instruction; departmental organization and problems; the community survey; the analysis of enterprises; the making of monthly and yearly outlines; the checking of skills; methods of the class period and lesson planning; the organization and conduction of practicums and shop work; equipment; records and reports; summer work of teacher; the first months work; observation and critiques.

Ed. 106. *Teaching Secondary Vocational Agriculture*—Three to five credit hours, determined by the amount and character of work done. Given any term senior year. Required of seniors in Agricultural Education. Ed. 105 must be offered as a prerequisite to or as a prarallel of this course.

Observation; monthly outlines, lesson plans; class teaching; conferences; critiques.

Ed. 128. *The Rural Community and Agricultural Education*—Three credit hours. Second term. Senior year. Required of seniors in Agricultural Education. Prerequisite, Ed. 104.

Community surveys from the point of view of the teacher of vocational agriculture; nature, structure, historical background and types of rural communities; the rural mind; essentials of social growth; rural needs; place of agricultural education in the rural school system; needed reorganization and developments.

Ed. 129. *History of Agricultural Education*—Three credit hours. Third term. Open to advanced undergraduates and graduates by special arrangement. Prerequisite, Ed. 127.

This course attempts to trace the evolution of ideals in rural living and is intended primarily for those who expect to be called upon to assist in shaping the destinies of rural people. It embraces a study of literature—poetic, legislative, and pedagogic—in which the life of the farmer is used as a basis of social culture. It traces a recognition of country life in moral and intellectual training from the earliest records—biblical, classical, and historical.

Ed. 138. *Problems and Practice in Agricultural Extension*—Three credit hours. Third term. Open to juniors and seniors.

Given under the supervision of the Extension Service and designed to equip young men to enter the broad field of extension work. Methods of assembling and disseminating the agricultural information available for the practical farmer; administration, organization, supervision, and practical details connected with the work of a successful county agent, club worker, and extension specialist. Students will be required to engage in specialists', county agents' and boys' club work as assistants, always under the guidance of men experienced in the respective fields. Traveling expenses for this course will be adjusted; according to circumstances, the ability of the man, and the service rendered.

Ed. 140-141. *Methods, Materials and Practice in Farm Shop*—One credit hour. Laboratory. Second and Third terms. Required of seniors in Agricultural Education. Prerequisite, Ed. 105.

Objectives and methods of approach in teaching farm shop in secondary schools, devices for motivating and socializing work, checking and measuring results, selection and arrangement of equipment. Practice in handling tool sharpening, soldering, harness and belt repair, simple wiring, cement work, painting, staining, varnishing, woodworking, and hot and cold iron projects, and other small repair projects that arise on the farm.

Home Economics Education

Ed. 107. *Secondary Vocational Home Economics*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors in Home Economics Education. Prerequisite, Ed. 103.

Theory of vocational education; interpretation of the Smith-Hughes law; aims and objectives of secondary vocational home economics; analysis of various home activities; organization of a course of study and its relation to the needs of the girl and the community; the school and the home project; school plant and equipment; reference books.

Ed. 108. *Problems and Practice in Teaching Secondary Vocational Home Economics*—Three credit hours. Two lectures and one laboratory period. First term. Required of all seniors in Home Economics Education. Prerequisite, Ed. 107.

Relation of the home economics teacher to the school; methods of instruction; lesson planning; conduct of a laboratory class; organization of the school and the home project instruction; records and reports; the improvement of the home economics library; selection of needed equip-

ment; arrangement of schedule; community service; professional improvement; the first month's work; study of types of class room work; observation and critiques.

Ed. 109. *Teaching Secondary Vocational Home Economics*—Three to five credit hours, determined by the amount and character of work done. Given any term senior year. Required of seniors in Home Economics Education. Ed. 108 must be offered as a prerequisite to or as a parallel of this course.

Observation, monthly outlines; lesson plans; application of the principles of the technic of teaching; conduct of laboratory class; class teaching; conference and critiques.

Ed. 130. *History of the Family*—Three credit hours. First term. Required of seniors in Home Economics Education.

History of the family from the early ages to the present time; the industrial revolution and its effect upon family life.

Ed. 131. *Education of Women*—Three credit hours. Second term. Open to juniors and seniors. Required of seniors in Home Economics Education.

Women's work in relation to the home and to society; opening of occupations and professions to women; modern problems of women; civic, educational, industrial and family responsibilities.

Ed. 132. *Child Care and Welfare*—Three credit hours. Third term. Required of seniors in Home Economics Education.

Child psychology from the standpoint of development; health, habits, play and recreation.

Ed. 139. *Problems and Practice in Home Economics Extension Work*—Three credit hours. Third term.

The Smith-Lever Act; various phases of extension work and relation of the extension service to the home, community, and country; analysis of home making activities and the study of the problems of the home; organization of subject matter; use of illustrative material; scope of women's study groups; boys' and girls' club work.

Industrial Education

Ed. 110. *Industrial Education in Secondary Schools*—Three credit hours. Third term. Open to juniors and seniors. Required of juniors in Industrial Education. Prerequisite, Ed. 103.

Theory of vocational education; purposes of industrial education; types of industrial schools; vocational and trade analysis; place of auxiliary knowledge; related trade courses; industrial school population; materials and equipment; relation of the industrial teacher to the school system.

Ed. 111. *Problems and Practice in Teaching Industrial Education in Secondary Schools*—Three credit hours. Two lectures and one laboratory period. First term. Required of seniors in Industrial Education. Prerequisite, Ed. 110.

Problems of the related trade teacher as they arise in connection with

trade analysis; lesson planning; methods of the class period; discipline; organization and management; observation and critiques.

Ed. 112. *Teaching Industrial Subjects in Secondary Schools*—Three to five credit hours, determined by the amount and character of work done. Given any term senior year. Required of seniors in Industrial Education. Ed. 111 must be offered as a prerequisite to or as a parallel of this course.

Observation; outlines; lesson plans; class teaching; conferences and critiques.

Ed. 131. *History of Industrial Education*—Three credit hours. Second term. Open to seniors and graduate students.

History of the origin and development of industrial education in the light of group needs; industrial education in the United States; development of schools; present problems in reorganization.

College of Engineering

Whether a man follows engineering as his life's work or enters other fields, it is well recognized that the training received in the engineering colleges of today affords a splendid preparation that fits him for many callings in public and private life outside of the engineering profession.

The College of Engineering, which includes the Departments of Civil, Electrical and Mechanical Engineering, is undergoing a reorganization. The general purpose is to broaden the courses of instruction the better to prepare young men to enter the public service. The large public works program contemplated in practically every state in the union makes urgent the demand for engineers trained for such work. The public service demands the electrical and mechanical as well as the civil engineer. Maryland needs such men to carry on her great highway work and large public undertakings contemplated in various cities and counties. Such training seems preeminently a function of the State's University.

It is not the intention that the subject matter of the courses shall be essentially different from that usually given, but that the viewpoint of the student and the application of the principles will be that of public service. In order to give the time necessary both to the technical subjects and to those of a more general character, a careful revision of all courses of study is being made so that the utmost time available in each term may be used to the best advantage.

Beginning with the college year of 1921, it is expected to have the curriculum so arranged as to prescribe the same courses of study for all freshmen and all sophomores, respectively, in the Engineering College. Among other advantages that will accrue from such a change, is the very important one that a young man will not be called upon to decide the branch of engineering in which he will specialize until his junior year.

The changes contemplated will necessitate a somewhat greater amount of preparation than the standard at present prescribes, and the hearty and sympathetic co-operation of the high schools of the state is asked that Maryland boys may be even better prepared for their university work to the end that they may be well qualified to enter on their life's work with the best possible university training.

Engineering research is recognized today as one of the most needed useful contributions that the engineering colleges can make to the state. Work of this character is already under way at the University of Maryland where, through the co-operation with the U. S. Bureau of Public Roads and the Maryland States Roads Commission, highway research problems are being studied, the solution of which will prove of utmost value to the people of the state. It is planned to develop as rapidly as possible this phase of the work which will have, aside from its great economic

value to the state, an important educational value due to the close contact the students will have with the live engineering problems of today.

The war brought prominently before all people the work done by the engineers and now a most important part is played by the profession in the reconstruction problems that confront, not alone the countries of Europe, but the United States as well. The opportunities for the well trained engineer were never greater than at present. Great projects are under way and even greater contemplated, which the engineer of the future will be called upon, not only to build, but to initiate. He will require the broadest training he can secure. He must know more than merely the technique of his profession, he must be able to grasp the economic problems that underlie all great public works. It is towards such a training and understanding that the courses in the College of Engineering are being developed.

Batchelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in Civil, Electrical and Mechanical Engineering, respectively.

Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer or Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work for three years.
2. His registration for a degree must be approved at least 12 months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.
3. He shall present a satisfactory thesis on an approved subject.
4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Equipment

The Engineering building is equipped with lecture-rooms, recitation-rooms, drafting-rooms, laboratories and shops for all phases of engineering work.

Drafting-Rooms

The drafting-rooms are equipped for practical work. Engineering students must provide themselves with approved drawing outfit, material and books, the cost of which during the freshman year amounts to about $25.

Electrical Engineering Laboratory

This laboratory is fitted with such appliances as may be used to the best advantage in engineering practice. These include a potentiometer

and standard instrument for calibrating the various measuring instruments used in the laboratory. A Sharp-Miller portable photometer and a Standard photometer for measuring the candle-power of lamps and for determination of illumination intensities. A large number of portable ammeters, voltmeters and indicating wattmeters for direct and alternating current measurements, electrostatic voltmeter, frequency meters, silver and copper voltameters, Sieman's type electrodynamometer, watthour-meters and an ascillograph.

A Curtis steam turbine, direct connected to a 35-kilowatt compound generator, has been installed for testing purposes. This may be used in connection with the University lighting plant when needed and will be used for light and power service in the Engineering Building.

The laboratory is so wired that connection may be made readily between any part of the University lighting plant and the turbo-generator or any of the apparatus in the dynamo-room.

The apparatus in the dynamo-room includes the following; A 10-kilowatt rotary converter of the latest type, with speed limit and end play devices; five-horse-power variable speed, commutating pole motor; a 7.5 kilowatt, 60-cycle, 220-volt alternator designed to operate either as a polyphase generator, synchronous motor, frequency changer, constant speed induction motor or variable speed induction motor. The following parts are supplied with the set to make possible its operation in any of the above-named ways: a stationary armature for use either as an alternating current generator or as an induction motor field; a revolving field, a squirrel cage induction motor rotor with starting compensator having self-contained switches; an induction motor rotor with 3-phase collector rings, external resistance and controller; a 2-kilowatt booster set; a five-horse-power compound direct current motor and a 1.5 horse power shunt motor fully inclosed; a 7.5-kilowatt, 120-volt, 3-phase self-excited generator direct connected to a 115-volt compound direct current motor; a motor generator set consisting of a 3.6-horse-power shunt motor direct connected to a 2-kilowatt generator; several small D. C. and A. C. motors and generators, two 2-kilowatt transformers to transform power from 110 or 220 volts to 1100 or 2200 volts.

The main switchboards are used to mount the necessary circuit apparatus to control the generators and motors as well as the various circuits in the dynamo-room and testing laboratory. In addition to the special electrical engineering equipment, the University lighting plant will be used for illustrative and experimental purposes. This plant contains, together with other apparatus useful in teaching electrical engineering, two Bullock generators of 40 kilowatts total capacity.

The telephone laboratory is well equipped with apparatus for the magneto and common battery systems.

Mechanical Engineering Laboratory

Among the appartus installed in the laboratory are a cross compound condensing Corliss engine of 50-horse-power, equipped with break, in-

dicators, relief valves, reducing motion, steam and vacuum gauges and speed indicator, which gives ample opportunity for steam consumption and brake tests. This is connected with the shops, so that at any time it may be switched on and drive them. The University power plant, with its vacuum heating system, three 100-horse-power return tubular boilers and two electric generating units, offers opportunities for experimental work. An eight-horse-power, four-cycle gasoline engine equipped with prony brake permits the making of tests in gas engineering.

Materials Laboratory

In this laboratory the apparatus for tesing materials includes a 100,000-pound Riehle combined hand and power-testing machine for making tensile, compression, shearing and transverse tests on various kinds of materials; a 1,000-pound Riehle machine for testing cement briquettes, etc.

Highway Research Laboratory

Several highway research problems have been undertaken. A study of the traffic over the highway system of Maryland has been made and a traffic map prepared. This work was done in cooperation with the State Roads Commission and the U. S. Bureau of Public Roads.

A study of the concrete roads of the State is in progress. For this purpose a special core drill apparatus was engaged the entire past summer drilling cores from the various points, collecting, in all, over 800 samples. These are being examined to determine their physical properties. The object of this research is to ascertain what effect traffic has on the life of the concrete. Closely related to this investigation is the determination of the "fatigue" of concrete, for which special apparatus has been made at the University laboratory and work is actively under way.

As the research work develops, additional equipment will be added.

Hydraulic Laboratory

Apparatus suitable for the determination of the coefficient of discharge for small orifices, weirs, etc., has been installed in this laboratory. Experimental work in stream gauging is made on the streams in the vicinity.

The Shops

The shops are well lighted and admirably adapted to the purpose for which they were designed. The wood-working shop contains accommodations for bench work and wood turning. The power machinery in this shop is a band and universal circular saw, one 16-inch by 10-foot pattern-maker's lathe, three grindstones, a wood trimmer, 26-inch wood planer, 14-inch joiner and universal tool grinder.

In the forge shop are sixteen power forges, one hand forge, a power emery grinder, and a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smith's tools for each forge.

The foundry is equipped with an iron cupola, which melts 1,200 pounds of iron per hour, a brass furnace, one core oven and the necessary flasks and tools.

The machine shop equipment consists of one 10-inch speed lathe, one 22-inch engine lathe with compound rest, one 12-inch combined foot and power lathe, two 14-inch engine lathes, one 25-inch drill press, one No. 4 emery tool grinder, one No. 1½ universal milling machine and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

The machinery of the pattern and machine shops is driven by a 9 by 14-inch automatic cut-off, high-speed engine, built by members of the junior and senior mechanical engineering classes, after the standard design of the Atlas engine. An 8 by 12-inch engine drives the machinery of the blacksmith shop and foundry.

Surveying Equipment and Models

This equipment includes a number of transits, levels, compasses, plane tables and minor instruments for use in plane, topographic, railroad, highway and geodetic surveying. These are added to as the necessity for other equipment arises. The models include various types of roads, bridges, culverts, etc.

Libraries

Each department contains a well selected library of books for reference and the standard engineering magazines. Students are encouraged to take advantage of the opportunity for reading afforded in the departmental as well as in the general library.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are also required to attend and take part in the meetings of the Engineering Society and Seminar and engineering lectures.

In addition to the requirements of the regular courses of study all students in the Engineering college are required during each of the three summer vacations to obtain employment in some lines of commercial work, preferably that which relates to engineering. Unless the student can offer some adequate reason why he has not been so employed during at least two months of each of his summer vacation periods it may be considered sufficient cause for withholding his degree.

The proximity of the University to Baltimore and Washington and to other places where there are great industrial enterprises offers an excellent opportunity for engineering students to observe what is being done in their chosen field. An instructor accompanies students on all trips of inspection.

Freshman Year

Required of all students in Engineering.

Term:	*I*	*II*	*III*
Composition and Rhetoric (Eng. 101-103)	3	3	3
Oral English (P. S. 101-103)	1	1	1
Modern Language	3	3	3
Trigonometry, Analytic Geometry (Math. 101-103)	5	5	5
Chemistry (Inorg. Chem. A-B, 101-103)	4	4	4
Engineering Drafting (Dr. 101-103)	1	1	1
Shop and Forge Practice (Shop 101-103)	1	1	1
Military Science (R. O. T. C.) (M. I. 101)	2	2	2
Engineering Lectures	..	..	..

Sophomore Year

Required of all students in Engineering.

Term:	*I*	*II*	*III*
Oral English (Pub. Sp. 104-106)	1	1	1
*Modern Language (Adv. Course)	3	3	3
*Modern and Contemporary History (His. 109-111)	3	3	3
Advanced Algebra, Dif. & Intg. Calculus (Math. 104-105)	5	5	5
Physics (Phys. 101-103)	5	5	5
Descriptive Geometry (Dr. 104-106)	2	2	2
Machine Shop Practice (Shop 104-106) (M. & E.)	1	1	1
Civil	1	..	..
Military Science (R. O. T. C.) (M. I. 102)	2	2	2
Plane Surveying (Surv. 101-103) (M. & E.)	1	2	..
Civil	1	2	2
Engineering Lectures	..	..	..

*Alternatives.

Civil Engineering Curriculum

Junior Year

Beginning 1922-1923.

Term:	*I*	*II*	*III*
*Current History (His. 101-103)	1	1	1
*Political Economy (Econ. 101-103)	3	3	3
*Oral English (Pub. Sp. 107-109)	1	1	1
*Engineering Geology (Geol. 101-103)	1	1	1
*Engineering Mechanics (Mech. 101-103)	3	3	3
†Military Science (R. O. T. C.)	..	..	..
Advanced Course (M. I. 103)	3	3	3
Prime Movers (Engr. 107-109)	3	3	3
Design, Structures, Elements (C. E. 101-103)	3	3	3
Materials of Engineering (C. E. 104)	3	..	..
Masonry Construction (C. E. 105)	..	3	..
Advanced Surveying (Surv. 104)	..	..	3
Engineering Lectures	..	..	..

Senior Year

Beginning 1923-1924.

Term:	*I*	*II*	*III*
*Oral English (Pub. Sp. 110-112)	1	1	1
*Engineering Jurisprudence (Engr. 101-103) (Seminar Course, one afternoon a week)	1	1	1
*Public Utilities (Engr. 104-106)	1	1	1
*Engineering Chemistry (Chem. 109-111)	1	1	1
†Military Science (R. O. T. C.)	..	..	..
Advanced Course (M. I. 104)	3	3	3
Highways (C. E. 106-108)	4	4	4
Design.—Masonry Structures (C. E. 109-111)	3	3	3
Design.—Steel Structures (C. E. 112-114)	3	3	3
Sanitation (C. E. 115-117)	3	3	3
‡Railroads (C. E. (118-120)	1	1	1
‡Sanitary Science (Public Health) (C. E. 121-123)	1	1	1
‡Drainage and Irrigation (C. E. 124-126)	1	1	1
Engineering Lectures	..	..	..

*Required of all Engineering students.
‡Alternatives.
†Open as an extra course to those Engineering students only who have average grades of A or B for both Freshman and Sophomore years.

Electrical Engineering Curriculum

Junior Year

Beginning 1922-1923.

Term:	*I*	*II*	*III*
*Current History (His. 101-103)	1	1	1
*Political Economy (Econ. 101-103)	3	3	3
*Oral English (Pub. Sp. 107-109)	1	1	1
*Engineering Geology (Geol. 101-103)	1	1	1
*Engineering Mechanics (Mech. 101-103)	3	3	3
†Military Science (R. O. T. C.)	3	3	3
Advanced Course (M. I. 103)	..	..	..
Design.—Machine, Elements (M. E. 101)	4	..	..
Direct Currents (E. E. 101-103)	2	6	6
*Prime Movers (Engr. 107-109)	3	3	3
Engineering Lectures	..	..	..

*Required of all Engineering students.
†Open as an extra course to those Engineering students only who have average grades of A or B for both Freshman and Sophomore years.

Senior Year

Beginning 1923-1924.

Term:	*I*	*II*	*III*
*Oral English (Pub. Sp. 110-112)	1	1	1
*Engineering Jurisprudence (Engr. 101-103) (Seminar Course, one afternoon a week)	1	1	1
*Public Utilities (Engr. 104-106)	1	1	1
*Engineering Chemistry (Chem. 109-111)	3	3	3
†Military Science (R. O. T. C.)	..	..	..
Advanced Course (M. I. 104	5	5	5
Alternating Currents (E. E. 104-106)	2	2	2
Design.—Electric Machine (E. E. 107-109)	3	3	3
Telephones, Telegraphs, Electric Rwys. (E. E. 110-112) Illumination, Electric Power Transmission, Radio, Telegraphy and Telephony (E. E. 113-115)	4	4	4
Engineering Lectures	..	..	..

*Required of all Engineering students.
†Open as an extra course to those Engineering students only who have average grades of A or B for both Freshman and Sophomore years.

Mechanical Engineering Curriculum

Junior Year

Beginning 1922-1923.

Term:	*I*	*II*	*III*
*Current History (His. 101-103)	1	1	1
*Political Economy (Econ. 101-103)	3	3	3
*Oral English (Pub. Sp. 107-109)	1	1	1
*Engineering Geology (Geol. 101-103)	1	1	1
*Engineering Mechanics (Mech. 101-103)	3	3	3
Foundry Practice (Shop 107)	..	..	2
†Military Science (R. O. T. C.)	3	3	3
Advanced Course (M. I. 103)	..	..	..
Design.—Machine, Elements (M. E. 101-103)	4	4	4
*Prime Movers (Engr. 107-109)	3	3	3
Kinematics (Mech. 104-106)	2	2	..
Engineering Lectures	..	..	..

*Required of all Engineering students.
†Open as an extra course to those Engineering students only who have average grades of A or B for both Freshman and Sophomore years.

Senior Year

Beginning 1923-1924.

Term:	I	II	III
*Oral English (Pub. Sp. 110-112)	1	1	1
*Engineering Jurisprudence (Engr. 101-103) (Seminar Course, one afternoon a week)	1	1	1
Public Utilities (Engr. 104-106)	1	1	1
*Engineering Chemistry (Chem. 109-111)	1	1	1
†Military Science (R. O. T. C.)	3	3	3
Advanced Course (M. I. 104)	..	..	..
Design.—Prime Movers (M. E. 104-106)	3	3	3
Design.—Power Plants (M. E. 107-109)	2	2	2
Design.—Pumping Machinery (M. E. 113)	..	2	..
Thermodynamics (Mech. 107-109)	3	3	3
Sanitation (C. E. 115-117)	3	3	3
Factory Organization (M. E. 110)	2	..	..
Mechanical Laboratory (M. E. 111-112)	1	1	..
Heating and Ventilation (M. E. 114)	..	..	3
Engineering Lectures	..	..	..

*Required of all Engineering students.
†Open as an extra course to those Engineering students only who have average grades of A or B for both Freshman and Sophomore years.

DESCRIPTION OF COURSES

Civil Engineering

C. E. 101-103. *Elements of Design of Structures—Steel Structures*—Three credit hours. First and second terms. Lectures and laboratory. Required of juniors in Civil Engineering.

Design of steel beams and columns. Analysis of stresses in roof trusses, plate girders, bridge trusses and steel buildings. The preliminary steps towards complete design of these structures.

Reinforced Concrete—Three credit hours. Third term. Lectures and laboratory. Required of juniors in Civil Engineering.

The fundamental principles of the theory and practice of reinforced concrete construction, with applications to the design of beams, slabs and columns.

C. E. 104. *Materials of Engineering*—Three credit hours. First term. Lectures and laboratory. Required of all juniors in Engineering.

The composition, manufacture and properties of the principal materials used in engineering and of the conditions that influence their physical characteristics. The interpretation of specifications and of standard tests. Laboratory work in the testing of steel, wrought iron, timber, brick, cement and concrete.

C. E. 105. *Masonry Construction*—Three credit hours. Second term. Required of juniors in Civil Engineering.

The methods employed in the construction of masonry structures; including foundations, dams, retaining walls, piers. abutments, culverts, and arches. Preliminary steps towards complete design of these structures.

C. E. 106-108. *Highways*—Four credit hours each term. Lectures and field work. Required of seniors in Civil Engineering. Open only to Engineering students of senior standing.

First term: The principles of location, construction and maintenance of roads and pavements.

Second term: Highway contracts and specifications, covering the proposal, bidding and letting of contracts, and a complete analysis of the items that comprise the specifications. A discussion of the cost of highways both to the public and to the contractor and an analysis of the items that influence costs.

Third term: The road laws of the various States, Highway Deparament organizations. Highway transportation and its interrelationship to other methods of transportation, highway traffic, highway economics and highway financing.

Field and drafting room work consists of the necessary surveys, plans and estimates of cost for the construction of a section of improved road.

C. E. 109-111. *Design of Masonry Structures*—Three credit hours each term. Lectures and laboratory. Required of seniors in Civil Engineering. Prerequisite C. E. 105, Mech. 101-103.

The complete design and detailing of structures of concrete and of stone; including retaining walls, dams, arches, and bridges, and the preparation of plans and bills of materials.

C. E. 112-114. *Design of Steel Structures*—Three credit hours each term. Lectures and laboratory. Required of seniors in Civil Engineering. Prerequisite C. E. 101-103, Mech. 101-103.

The complete design and detailing of steel structures, a continuation of C. E. 101-102.

C. E. 115-117. *Sanitation.*—Three credit hours each term. Lectures and laboratory. Required of seniors in Civil Engineering. Prerequisite, Mech. 101-103.

Water supply and sewage disposal. Methods of estimating consumption-design of water system. Estimating quantity of sewage and design of sewage systems. Complete designs are prepared for water supply and sewage disposal for a given community.

C. E. 118-120. *Railroads*—One credit hour each term. One afternoon per week. Prerequisite Surv. 104. Alternative for seniors in Civil Engineering.

The theory and practice of railroad design, construction, operation and maintenance. Field and drafting room work consists of a reconnoissance and survey of a short railroad and preparation of the map, profiles and estimates from the survey.

C. E. 121-123. *Sanitary Science* (*Public Health*)—One credit hour each term. Seminar course one afternoon per week. Alternative, open only to seniors in Civil Engineering.

State and municipal sanitary laws, organization and functions of state and municipal health departments, public health surveys.

C. E. 124-126. *Drainage and Irrigation*—One credit hour each term. One afternoon per week. Alternative, open only to seniors in Civil Engineering.

The application of engineering principles to the design and construction of drainage and irrigation works. Field and drafting room work consists of surveying, designing and laying out a proposed drainage project.

Electrical Engineering

E. E. 101-103. *Direct Currents*—Two credit hours first term, six credit hours (two laboratory periods and four lectures) second and third terms. Prerequisite Phys. 101, Math. 104-106, Inorg. Chem. 101-103.

Principles of design, construction and operation of direct current generators and motors, direct current control apparatus, auxiliary apparatus used in connection with storage batteries.

Laboratory experiments on the calibration of instruments, and commercial tests on direct current generators and motors.

E. E. 104-106. *Alternating Currents*—Five credit hours: three lectures and two laboratory periods each term. Prerequisite E. E. 101-103.

Analytical and graphical problems on series and parallel alternating current, circuits, construction and practical applications of single phase and polyphase generators, synchronous and induction motors, synchronous converters, transformers, single phase series motors, switchboard appliances, the use of the oscillograph in connection with various experiments to show current and voltage phase relations in series and parallel alternating current circuits, alternating current power measurement, characteristics of synchronous and induction generators and motors, single phase transformers and synchronous converters.

E. E. 107-109. *Electric Machine Design*—Two credit hours each term. Prerequisite, E. E. 101-103 and M. E. 101.

Materials of construction and design of the electric and magnetic circuits of a direct current motor or generator, principles of design of the electric and magnetic circuits of alternating current generators, motors and transformers and a complete design either of an alternating current generator, motor or transformer.

E. E. 110-112. *Telephones, Telegraph and Electric Railways*—Three credit hours each term. Two lectures and one laboratory period. Prerequisite, E. E. 101-103.

History and principles of magneto telephone and variable resistance transmitter, carbon transmitter, telephone receiver, induction coils, and calling equipment. These various components of the telephone then are studied as a complete unit in the local battery and common battery telephones. Magneto and common battery switches used in telephone exchanges, automatic telephone and the operation of simple, duplex and quadruplex telegraphy.

In the laboratory the units are assembled and operated.

Traffic studies, train schedules, motor characteristics and the development of speed—distance and power—time curves, systems of control, motors and other railway equipment, electrification system for electric railways, including generating apparatus, transmission lines, substations and distribution and utilization of electrical energy for car operation; electrification of steam roads and application of signal systems, problems in electric railway operation, beginning with the selection of proper car equipment and ending at the substation.

E. E. 113-115. *Illumination*—Four credit hours. Three lectures and one laboratory period. First term. Prerequisite, E. E. 101-103.

Electric Power Transmission—Four credit hours. Four lectures. Second term. Prerequisite, E. E. 101-103.

Radio Telephones and Telegraphs—Four credit hours. Three lectures and one laboratory period. Third term. Prerequisite, E. E. 110-112.

Series systems of distribution, methods of street lighting, calculation of voltage drop, regulation, weights of wire and the methods of feeding parallel systems, principles and units used in illumination work, lamps and reflectors, candle power measurements of lamps, measurement of illumination intensities, and calculations for the illumination of laboratories and class rooms; survey of the electrical equipment required in central stations and substations, transmission of electrical power, including poles, towers, lines, etc., practical problems to illustrate the principles of installation and operation of power machinery.

Principles of radio telegraphy and telephony, construction and operation of modern transmitters, antennae and receiving circuits, with special emphasis on the use of the vacuum tube both for transmitting and receiving wireless signals, experiments with various types of receiving apparatus.

Drafting

Dr. 101-103. *Engineering Drafting*—One credit hour each term. One laboratory period. Required of all freshmen in Engineering.

Freehand Drawing—Lettering, exercises in sketching of technical illustrations and objects, proportion and comparative measurements.

Mechanical Drawing—Use of instruments, projections and working drawings, drawing to scale in pencil and in ink, topographic drawing, tracing and blue printing.

Dr. 104-106. *Descriptive Geometry*—Two credit hours each term. Two laboratory periods. Required of all sophomores in Engineering.

First Term—Orthographic projection as applied to the solution of problems relating to the point, line and plane, intersection of planes with solids and development.

Second Term—Generation of surfaces; planes, tangent and normal to surfaces; intersection and development of curved surfaces.

Third term—Shades and shadows, perspective, map projection.

General Engineering

Engr. 101-103. *Engineering Jurisprudence*—One credit hour each term. Seminar course of one afternoon per week. Required of all Engineer students of senior standing.

A study of the fundamental principles of law relating to business and to engineering; including contracts, agency, sales, negotiable instruments, corporations and common carriers. These principles are then applied to the analysis of general and technical clauses in engineering contracts and specifications.

Engr. 104-106. *Public Utilities*—One credit hour each term. Open only to students of senior standing. Prerequisite, Econ. 101-103.

The development of public utilities, franchises, functions, methods of financing and control of public utilities. Service standards and their attainment in electric, gas, water, railway and other utilities. The principles that have been adopted by the courts and public service commissions for the evaluation of public utilities for rate making and other purposes.

Engr. 107-109. *Prime Movers*—Three credit hours each term. Lectures and laboratory. Required of all juniors in Engineering. Prerequisite, Math. 104-106.

Salient features of the operation of steam, gas, hydraulic and electric prime movers and pumps. Comparison of types of each, methods of assembling or setting up in place for operation. Service tests.

Mechanics

Mech. 101-103. *Engineering Mechanics*—Three credit hours each term. Required of all juniors in Engineering. Prerequisite, Math. 104-106.

Applied Mechanics—The analytical study of statics dealing with the composition and resolution of forces, moments and couples, machines and the laws of friction, dynamics, work, energy and the strength of materials.

Graphic Statics—The graphic determination of stresses in framed structures.

Elements of Hydraulics—Flow of water in pipes, through orifices and in open channels. Determination of the coefficient of discharge, velocity and contraction in pipes and orifices.

Mech. 104-106. *Kinematics*—Two credit hours. First and second terms. Required of juniors in Mechanical Engineering. Prerequisite Math. 104-106.

Principles—Determination of the instantaneous axis and instantaneous center. Analysis of displacement, velocity and acceleration diagrams. Design of cams. Form of tooth outline in the epicycloidal and involute systems of gearing.

Mech. 107-109. *Thermodynamics*—Three credit hours each term. Lectures and laboratory. Required of seniors in Mechanical Engineering. Prerequisite Mech. 101-103.

Laws underlying the fundamental equations. Perfect gases. Relation

between pressure, volume, temperature, work and heat of special changes of state. Calculation and drawing of Carnot's cycle and temperature entropy diagrams.

Mechanical Engineering

M. E. 101-103. *Elements of Machine Design*—Four credit hours each term. Lectures and laboratory. M. E. 101 required of Mechanical and Electrical junior engineers, M. E. 102-103 required of junior Mechanical engineers.

The application of the principles involved in determining the proportions and form of machine parts. The design of bolts, screws, shafting, gears, springs, crabs and winches.

M. E. 104-106. *Design of Prime Movers*—Three credit hours each term. Lectures and laboratory. Required of seniors in Mechanical Engineering. Prerequisite M. E. 101-103.

Analysis of the stress in gas and steam engines. Proportioning the essential parts and estimating the cost of each. The steam boiler; its design and cost.

M. E. 107-109. *Design of Power Plants*—Two credit hours each term. Lectures and laboratory. Required of seniors in Mechanical Engineering. Prerequisite M. E. 101-103.

The design of a complete power plant; including specifications, the building and the lay out of the equipment.

M. E. 110. *Factory Organization*—Two credit hours first term. Required of seniors in Mechanical Engineering.

Discussions relating to manufacturing processes. Time systems and cost accounting. Piece work versus day work. The ebb and flow of labor. The economic expansion of business considered from the personal equation side.

M. E. 111-112. *Mechanical Laboratory*—One credit hour first and second terms. Required of seniors in Mechanical Engineering. Prerequisite Mech. 101-103.

Calibration of steam gauges and indicator springs. Indicated and brake horsepower of steam and gas engines. Setting of valves of plain slide valve and Corliss steam engines and gas engines. Operation of steam and gas engines.

M. E. 113. *Design of Pumping Machinery*—Two credit hours. Second term. Required of seniors in Mechanical Engineering. Prerequisite M. E. 101-103, Mech. 101-103.

Elementary design of double acting steam pumps and centrifugal pumps. The air lift and the hydraulic ram. Distributing system of water supply in a manufacturing establishment.

M. E. 114. *Heating and Ventilation*—Three credit hours. Third term. Required of seniors in Mechanical Engineering. Prerequisite Mech. 101-103. Mech. 107-108.

The principles of heating and ventilation. Radiating surfaces. Steam, hot water and hot air systems. Vacuum and vapor systems.

SHOP

SHOP 101-103. *Shop and Forge Practice*—One credit hour each term. Required of all freshmen in Engineering.

The use and care of wood working tools, exercise in sawing, planing, mortising, tenoning and laying out work from blue prints. Principles of pattern making with sufficient foundry practice to demonstrate the uses of pattern making. Forging of iron and steel, welding and making of steel tools.

SHOP 104-106. *Machine Shop Practice*—One credit hour each term. Required of all sophomores first term, required of sophomores in Mechanical and Electrical Engineering second and third terms. Prerequisite Shop 101-103.

SHOP 107. *Foundry Practice*—Two credit hours. Third term. Required of juniors in Mechanical Engineering. Prerequisite, Shop 104-106.

Molding in brass and iron. Core making. The cupola and its management. Lectures on selection of iron by fracture, fuels and the mixing and melting of metals.

SURVEYING

SURV. 101-103. *Plane Surveying*—One credit hour. First term. Two credit hours. Second and third terms. Lectures and field work. Required of sophomores in Civil Engineering, first, second and third terms, and of sophomores in Electrical and Mechanical Engineering first and second terms. Prerequisite Math. 101.

The theory and practice of plane surveying; including the use and adjustment of the transit, level, plane table and minor surveying instruments. Solution of practical problems in giving lines and grades for buildings, shafting and foundation, and in laying out curves. The computation of area and of earth work, and the principles of plan and map making and map reading.

SURV. 104. *Advanced Surveying*—Three credit hours. Third term. Lectures and field work. Required of juniors in Civil Engineering. Prerequisite, Surv. 101-103.

Practical astronomy and geodetic surveying. The determination of latitude, longitude and azimuth by stellar and by solar observations. Base line measurement and precise triangulation. City surveying. Hydrographic surveying.

The Graduate School

Graduate work is offered, under the supervision of the Dean of the Graduate School by competent members of the various faculties of instruction and research. These constitute the Faculty of the Graduate School.

The general administrative functions of the faculty are delegated to the Dean and Secretary of the School and a Graduate Council consisting of nine other members.

Work in accredited research laboratories of the U. S. Department of Agriculture and other local national research agencies under competent supervision is accepted, when previously arranged, as work in residence for part of the requirement. These laboratories are located in easy daily reach of the University. When previously arranged, certain approved courses, satisfactorily completed, at the American University, will also be accepted for part of the residence requirement for higher degrees.

ADMISSION AND REGISTRATION

Admission to the Graduate School is open to all graduates of this and other standard colleges and universities. Before entering upon graduate work all applicants must present evidence that they are qualified by their previous work to pursue the courses desired. Admission to the Graduate School does not necessarily imply admission to candidacy for a degree.

Every student is required to register at the office of the Graduate School at the beginning of each term. This applies to all students doing graduate work in the University even though they are not candidates for degrees. The student is given a registration card for the term on which after consultation with the professor in charge of the major subject, the program of work is entered. This must be approved by the departments involved and by the Dean before registration can be completed.

ADVANCED DEGREES

The advanced degrees conferred are Master of Science and Doctor of Philosophy for work in Agriculture and the Natural Sciences; Master of Arts for work in Liberal Arts, Education and Home Economics, and Doctor of Philosophy in Liberal Arts.

ADMISSION TO CANDIDACY FOR A DEGREE

The application for admission to candidacy for either the Master's or the Doctor's degree are made on application blanks which are obtained at the office of the Graduate School. These applications are first approved by the professor in charge of the major subject after consultation with the professors in charge of minor subjects, and then passed upon by the Graduate Council.

Each candidate for the Master's degree is required to make application for admission to candidacy at the completion of one third of the residence requirement. Candidates for the Doctor's degree must be admitted to candidacy at a date not later than the beginning of the academic year in which the degree is sought.

Master of Science and Master of Arts

The degree of Master of Science, or Master of Arts, will be conferred upon resident graduates who meet the following requirements:

1. The candidate must be a graduate of a qualified institution and must have the necessary prerequisites for the field of advanced work chosen.
2. He must complete a course of approved graduate study with one major and one or two closely related minor subjects, working on a full-time basis of one year of advanced work. The work may, when approved, be extended on a part-time basis over a longer period.
3. The candidate must complete at least 45 term credit hours including a thesis approved by a committee of the Graduate Faculty.
4. The candidate must pass a satisfactory examination.

Doctor of Philosophy

1. As prerequisites for admission to candidacy for the Doctor's degree the candidate must be a graduate of a standard college, must have a reading knowledge of French and German, and the necessary basic training in the chosen field for advanced work.
2. Three years of graduate study will usually be required. The first two of these years may be spent in other institutions offering standard graduate work. On a part-time basis the time needed will be correspondingly increased. The degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship and ability to carry on independent research in the special field in which the major work is done.
3. The candidate must select a major and one or two closely related minor subjects, constituting a single field of research.
4. The candidate must present a dissertation within the field of research selected. This must be in the hands of the Dean of the Graduate School in printed or typewritten form at least two weeks before the time at which degrees are granted.
5. The candidate must pass a final oral examination in the major and minor subjects.The examination will be given by a committee appointed by the Dean.

Advanced Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer or Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have been engaged successfully in acceptable engineering work for three years.
2. His registration for a degree must be approved at least 12 months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.
3. He shall present a satisfactory thesis on an approved subject.
4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical and Mechanical Engineering.

Graduate Fees

Each graduate student is subject to a matriculation fee of $10.00, a fixed charge of $1.00 per term credit hour and a diploma fee of $10.00.

Fellowships and Assistantships

The University offers fellowships and graduate assistantships in several departments. The fellowships are worth $500 and $720 and the graduate assistantships $1000 to $1500. All fees except the diploma fee are remitted.

All applications for fellowships and graduate assistantships together with credentials should be filed with the Dean of the Graduate School not later than May 15. The awards will be made on June 15 of each year, and the successful candidates must signify their acceptance within two weeks after the awards are made.

The College of Home Economics

Research into the sciences and the development of industries, art, and professions has so changed the philosophy of our educational system that it is now recognized that any educational system must include training of a technical nature. It must encourage the student's natural desire for work of a productive nature with a vital connection between theory and practice. These views have now been generally accepted and the result is noted in the combination of vocational, technical, and scientific work with the general studies to form a new course of study for young men and women.

The subjects taught in home economics are designed to fit young women to be capable workers and home makers in whatever sphere of life they may enter. The knowledge they gain from these subjects should give them contentment, industry, order, and a womanly feeling of independence and responsibility.

The courses of instruction given are planned to meet the needs of three classes of students: (1) those students who desire a knowledge of the general facts and principles of home economics; (2) those students who wish to make a specialty of home economics for the purpose of teaching the subject in secondary schools and colleges; (3) those who are interested in certain phases of home economics which deal with the work of the dietitian or of institutional manager.

Degrees

The degree of Bachelor of Science is conferred for the satisfactory completion of four years of prescribed courses, or 204 trimester hours.

Departments

For administrative purposes and for ease of instruction the College of Home Economics is organized into the departments of: Foods and Cookery, Textiles and Clothing, Hygiene and Health, and of Institutional and Home Management.

Equipment

In addition to the usual class room and laboratory facilities, the College maintains a newly built and equipped practice house in which the students will keep house for a period of six weeks during their senior year.

Curriculum in Home Economics

All students registered in the College of Home Economics are required to take the same work during the first two years. At the beginning of the third they may elect to continue with General Home Economics, in which

case the following outline of courses has been planned, or they may elect to specialize in a particular department.

The heads of the various departments together with the students wishing to specialize, will outline such courses.

Home Economics

FRESHMAN YEAR. *Term:*	*I*	*II*	*III*
Composition and Rhetoric (Eng. 101-103)	3	3	3
Inorgan. Chem. (Inorgan. Chem. 101-103)	4	4	4
Mathematics (106-108)	3	3	..
Zoology (Zool. 101-102)	4	2	..
Botany (Bot. 101-102)	..	2	4
Language	3	3	3
Garment Construction (Cloth. 101)	..	..	3
Hygiene	1	..	..

SOPHOMORE YEAR. *Term:*	*I*	*II*	*III*
Organic Chemistry (Org. Chem. 101-103)	3	3	..
Chemistry of Textiles (Industrial Chem. 105)	..	..	3
Agricultural Physics (Physics 107-108)	3	3	..
Art (Art 101)	3	..	..
Textiles (Tex. 101)	..	..	3
Millinery (Cloth. 103-104)	..	2	2
Drafting and Elementary Dress Design (Cloth. 102)	..	5	..
Foods (Foods 101-102)	5	..	4
Electives	3	3	3
Public Speaking (Pub. Sp. 101-103)	1	1	1

JUNIOR YEAR. *Term:*	*I*	*II*	*III*
Bacteriology (Bact. 101-102)	3	3	..
Chemistry of Foods (Industrial Chem. 106-107)	3	3	..
Nutrition (Foods 103-104)	..	5	5
Costume and Design (Art 102)	5	..	..
Dressmaking (Cloth. 105-106)	..	3	3
Social Psychology (Soc. Psy. 104-105)	3	3	..
Home Architecture and Interior Decoration (Art 104)	..	..	3
Electives	3	..	6

SENIOR YEAR. *Term:*	*I*	*II*	*III*
Preservation and Demonstration (Foods 105)	2	..	..
Experimental Cookery (Foods 106)	..	4	..
Household Management (H. M. 101-102)	3	3	..
Practice House (H. M. 103)	..	..	6
Marketing and Buying (H. M. 104)	2	..	..
Child Care and Welfare	..	..	3
Electives	10	10	8

Suggested Electives for Students in the College of Home Economics

Term:	I	II	III
Quantitative Analysis	..	..	..
Bacteriology (Bact. 103)	..	..	3
Public Speaking	1	1	1
Public Speaking	2	2	2
Language (French, Spanish, German)	3	3	3
Mathematics (Solid Geometry or Plane Analytics)	..	..	3
Political Science	2	2	2
Economics (Econ. 101-102)	3	3	3
General and Applied Psychology	..	2	2
Educational Psychology	5	..	..
Rural Sociology	..	..	3
Educational Guidance	1	1	1
Public Education in the United States (Ed. 101)	2	..	..
Institutional Management (H. M. 105-106)	3	3	..
Home Nursing and First Aid (H. M. 107)	..	3	..
Art and Handicraft (Art 103)	..	..	2
Music (Chorus)	..	..	..
Botany (Bot. 101)	..	..	4
Advanced Composition	..	..	..
Short Story	..	..	..
Nineteenth Century Poetry	..	..	..
The Drama	..	..	..
The Novel	..	..	..
History of the Family	3	..	..
Education of Women	..	3	..
Horticulture	..	..	..
Floriculture	..	..	..
Landscape Gardening	..	..	..
Poultry	..	..	..

Description of Courses

Foods 101. *Elementary Foods*—Five credit hours. Two lectures and three laboratory periods. First term. Prerequisite, Chem. 101-103.

Principles and Processes of Cookery. Production and composition of foods.

Foods 102. *Advanced Foods*—Four credit hours. Two lectures and two laboratory periods. Third term. Prerequisite, Foods 101.

Fancy cookery and meal service.

Foods 103-104. *Nutrition.*—Five credit hours. Three lectures and two laboratory periods. Second and third terms. Prerequisite, Foods 101-102, Chemistry of Foods.

Food requirements and metabolism. Diets for the normal and the abnormal person; invalid cookery; feeding of children.

Foods 105. *Preservation and Demonstration*—Two credit hours. Two laboratory periods. Prerequisite, Foods 101-102.

Canning and preserving; practice in giving public food demonstrations.

Foods 106. *Experimental Cookery*—Four credit hours. Two lectures and two laboratory periods. Second term. Prerequisite, Foods 101-102.

Experimental work in foods and cookery.

Textiles 101. *Textiles*—Three credit hours. Two lectures and one laboratory period. Third term. Prerequisite, lectures in Cloth, 102.

Identification of textile materials; variation of weave in regard to beauty and strength; use and value of fibers for clothing and household furnishing. Renovation of materials, dyeing and laundering.

Cloth. 101. *Garment Construction*—Three credit hours. Three laboratory periods. Third term.

Fundamental stitches; darning and patching; practice in hand and machine sewing in making children's clothes, including practical use of machine attachments.

Cloth 102. *Drafting and Elementary Dress Design*—Five credit hours. Two lectures and three laboratory periods. Second term. Prerequisite, Cloth. 101.

Use of commercial pattern; drafting, cutting, fitting, and designing of patterns. Construction of cotton dress.

Cloth 103-104. *Millinery*—Two credit hours. Two laboratory periods. Second and third terms.

Millinery stitches and simple trimmings; drafting of patterns for hats; making and covering of buchram frames; making hats in velvet, silk, straw, and transparent materials; renovation of materials.

Cloth 105-106. *Dressmaking*—Three credit hours. Three laboratory periods. Second and third terms. Prerequisite, Cloth. 102 and Art 102.

Application of design and principles of sewing to the construction of silk and wool dresses, made over garment and dinner or evening dress.

Art. 101. *Composition and Design*—Three credit hours. Three laboratory periods. First term.

Space division and space relation; color schemes and exercises; original designs in which lines, values, and colors are put together to produce fine harmony; perspective principles.

Art. 102. *Costume Design.*—Five credit hours. Two lectures and three laboratory periods. First term. Prerequisite, Art, 101.

Appropriate dress; application of color, harmony and proportion of parts to costumes designed in ink and water color; history of costume.

Art. 103. *Art. and Handicraft.*—Two credit hours. Two laboratory periods. Third term.

Applied design in embroidery, lace and stencils.

Art. 104. *Home Architecture and Decoration*—Three credit hours. Two lectures and one laboratory period. Third term. Prerequisite, Art. 101.

Styles of architecture; application of color in home decoration; furnishings from a sanitary, economical, and artistic point of view.

H. M. 101-102. *Household Management*—Three credit hours each term. First and second terms. Senior year.

The operation and maintenance of the household; its sanitation; plumbing; furnishing and equipment.

H. M. 103. *Home Management*—(Practice House). Six credit hours. Third term. Senior year.

Six weeks experience in keeping house in a household of six students.

H. M. 104. *Marketing and Buying*—Two credit hours. Two lectures. First term. Senior year.

Selection and purchasing of foods, keeping of inventories and accounts.

H. M. 105-106. *Institutional Management*—Three credit hours each term. First and second terms. Open to juniors and seniors.

General institutional organization including dining rooms, dormitories, and laundries.

H. M. 107. *Home Nursing and First Aid*—Three credit hours. Second term.

Instruction in domestic emergencies and first aid, and in the simple procedure in the home care of the sick.

The School of Law

The Faculty Council

Hon. Henry D. Harlan, A M., LL. B., LL. D., Dean.
Hon. Alfred S. Niles, A. M., LL. B.
Hon. John C. Rose, LL. B., LL. D.
Randolph Barton, Jr., Esq., A. B., LL. B.
Edwin T. Dickerson, Esq., A. M., LL. B., Secretary.
Hon. James P. Gorter, A. M., LL. D.
Charles McHenry Howard, Esq., A. B., LL. B.
Hon. Morris A. Soper, A. B., LL. B.

The calendar for the opening of the school and for holidays is the same as for the School of Medicine.

While the first faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study addressed to Students and the Profession Generally," which the *North American Review* pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. This was suspended in 1836 for lack of proper pecuniary support. In 1869 the Law School was organized, and in 1870 regular instruction therein was again begun. From time to time the course has been made more comprehensive and the staff of instructors increased in number. Its graduates now number more than two thousand, and included among them are a large proportion of the leaders of the Bench and Bar of the State and many who have attained prominence in the profession elsewhere.

The Law School building adjoins the Medical School and part of its equipment is a large library, maintained for the use of the students, which contains carefully selected text-books on the various subjects embraced in the curriculum. No fee is charged for the use of the library. Other libraries also are available for students.

Courses of Instruction

The courses of instruction in the Law School extend through three scholastic years of thirty-two weeks each, with an average of at least ten hours of class-room work each week, and aim to present a general and complete view of the science of law, with reference not only to its growth by judicial exposition, but also to the principles which have been engrafted upon it by positive enactment. The course of study embraces both the

theory and the practice of the law, and is designed thoroughly to equip the student for the practice of his profession, when he attains the Bar.

Scientific education is afforded in the principles of the Common Law, Equity, the Statutory Law of the State of Maryland and the Public Law of the United States.

Instruction is given by discussion of assigned cases and by lectures. The system of instruction embraces the study of assigned cases and of approved text-books. It is believed that instruction given through the use of cases alone is unnecessarily laborious, not conducive to uniformity, and likely to produce confusion in the students' mind unless supplemented by the aid of proper text-books. Accordingly a system of instruction, involving the use of both cases and text-books, is followed.

Students desiring to do so, may take elective or special courses. Such students are not candidates for the degree of Bachelor of Laws, but will receive certificates of proficiency in the branches pursued. Courses of instruction will be arranged with special reference to those desiring to obtain a knowledge of certain branches of the law, as an aid in business, or in the management of estates.

The Law School endeavors to uphold a high standard of legal education and it aims to give the student a comprehensive view of the whole field of the Law and particularly a knowledge of the fundamentals of American Law, in order to enable him to pass the examination for the Bar, if he has chosen the legal profession for his life work, or to fit him to care properly for his business interests if he desires legal education merely as the accomplishment of the well-equipped man of business or man of culture.

The lectures are intended to present all the leading principles of the common law applicable to the subject, and the modification of the common law by statute, and to give illustrations of the application of the common and statute law. Special attention is given to the statutes in force in Maryland, and to peculiarities of the law in that State, where there are such; but the reasons for these statutory modifications and local peculiarities are explained so that the student may in a short time acquaint himself with the local peculiarities of the law in any State in which he may practice.

Readings from text-books and adjudicated cases are assigned on the subjects treated of in the lectures.

It will be seen that the full course of study extends over three years and as the Faculty is satisfied that students, who have not made considerable progress in the law before entering the Law School, would do themselves and the School an injury by attempting to graduate in a shorter period, no student will be permitted to receive the degree of LL. B. until after three full years of study at this school, unless admitted to advanced standing.

Requirements for Admission

Applicants for admission to the Law School must be at least eighteen years of age, must present evidence of good moral character and if candidates for the degree of Bachelor of Laws, will be required to give to the study of the law three scholastic years of at least thirty-two weeks each, with an average of at least ten hours' class-room work each week, and to have completed at the time of admission to the School a four years' high school curriculum or such a course of preparation as would be required for admission to the principal colleges and universities in Maryland; but persons who are unable to comply with these entrance requirements or to spend three years in the study of law may be received as special students, not candidates for the degree, and upon completing the whole or any part of the course, may receive certificates of proficiency in the work completed, according to standards to be fixed.

The Faculty will consider that students are properly qualified for entrance as candidates for the degree of Bachelor of Laws who have received a bachelor's degree from any reputable college or university, or certificate of graduation from any of the Normal or high schools of the State of Maryland, or other reputable institution of a similar character, or have certificates showing that they have passed the entrance examinations to one of the principal colleges or universities in Maryland or a college or university maintaining a standard equal thereto. In the absence of such degree or certificate, a candidate for the degree of LL. B. must file with the secretary, at the time of matriculation, a certificate from the Clerk of the Court of Appeals of Maryland, showing that he has been registered as a law student, as provided by Chapter 426 of the Acts of the General Assembly of Maryland, passed at the Session of 1918.

Advanced Standing

Students may be admitted to advanced standing in the Senior or Intermediate classes upon satisfying the requirements for the work of the preceding year or years. These requirements may be met by presenting a certificate from any law school of accredited standing showing that the student has successfully completed equivalent courses in a law school, covering at least as many hours as are required for such subjects in this school. No credit will be given for study pursued in a law office.

Graduation

The Law School confers the degree of Bachelor of Laws on students who have attended the course of lectures for three years, have attained the required standard in examinations and in the Practice Court, and have submitted to the Faculty a satisfactory thesis.

Fees and Expenses

The fees for each term are payable in advance at the commencement of each term, and tickets of admission to the lectures are issued only on payment of fees.

The charges for instruction are as follows:

For term of four months.....$50.00

For session of eight months 100.00

Special students will be charged according to the courses pursued.

There will be a matriculation fee of ten dollars charged and payable for each student at the time of matriculation and an additional charge of ten dollars to each graduate as a diploma fee.

Special arrangements may be made by members of the Bar, or others, not regular students of the Law School, for atteding any particular part or branch of instruction at rates of charges in proportion to the above.

General living expenses of students are the same as outlined for the Medical School.

A special bulletin of The Law School may be obtained by addressing EDWIN T. DICKERSON, *Secretary*, University of Maryland Law School, Baltimore, Md., or The President, University of Maryland, College Park, Md.

School of Medicine

MEDICAL COUNCIL

J. M. H. ROWLAND, M. D., Dean.
ARTHUR M. SHIPLEY, M. D.
GORDON WILSON, M. D.
HARRY FRIEDENWALD, A. B., M. D.
WILLIAM S. GARDNER, M. D.
STANDISH McCLEARY, M. D.
JULIUS FRIEDENWALD, A. M., M. D.
ALEXIUS McGLANNAN, A. M., M. D.
BARTGIS McGLONE, A. B., Ph. D.
HUGH R. SPENCER, M. D.
H. BOYD WYLIE, M. D.
CARL L. DAVIS, M. D.
WILLIAM H. SCHULTZ, Ph. B., Ph. D.
M. C. PINCOFFS, S. B, M. D.

Board of Instruction

EMERITUS PROFESSORS.

RANDOLPH WINSLOW, A. M., M. D., LL. D.....Surgery
SAMUEL K. MERRICK, M. D.....Rhinology and Laryngology
GEORGE W. DOBBIN, A. B., M. D.....Obstetrics
HIRAM WOODS, A. M., M. D.....Opthalmology and Otology
CHARLES G. HILL, A. M., M. D.....Psychiatry
A C. POLE, M. D.....Anatomy
J. FRANK CROUCH, M. D.....Clinical Ophthalmology and Otology
CHARLES O'DONOVAN, A. M., M. D., LL. D...Clinical Medicine and Pediatrics
JOHN R. WINSLOW, A. B. M. D.....Rhinology and Laryngology
EDWARD N. BRUSH, M. D.....Psychiatry

L. E. NEALE, M. D., LL. D., Professor of Obstetrics.
JOHN C. HEMMETER, M. D., Ph. D., Sc. D., LL. D., Professor of Clinical Medicine
ARTHUR M. SHIPLEY, M. D., Professor of Surgery.
GORDON WILSON, M. D., Professor of Medicine.
WILLIAM ROYAL STOKES, M. D., Sc. D., Professor of Bacteriology.
HARRY FRIEDENWALD, A. B., M. D., Professor of Opthalmology and Otology.
ARCHIBALD C. HARRISON, M. D., Professor of Surgery.
CARY B. GAMBLE, JR., A. M., M. D., Professor of Medicine.

WILLIAM S. GARDNER, M. D., Professor of Gynecology.
STANDISH McCLEARY, M. D., Professor of Pathology and Clinical Medicine.
JULIUS FRIEDENWALD, A. M., M. D., Professor of Gastro-Enterology.
J. M. H. ROWLAND, M. D., Professor of Obstetrics and Dean of the Faculty.
ALEXIUS McGLANNAN, A. M., M. D., Professor of Surgery.
THOMAS C. GILCHRIST, M. R. C. S., L. S. A., M. D., Professor of Dermatology.
G. MILTON LINTHICUM, A. M., M. D., Professor of Diseases of the Rectum and Colon.
W. B. PERRY, M. D., Professor of Clinical Gynecology.
TILGHMAN B. MARDEN, A. B., M. D., Professor of Histology and Embryology.
J. MASON HUNDLEY, M. D., Professor of Clinical Gynecology.
R. TUNSTALL TAYLOR, A. B., M. D., Professor of Orthopedic Surgery.
JOS. E. GICHNER, M. D., Professor of Clinical Medicine and Physical Therapeutics
CHARLES W. McELFRESH, M. D., Professor of Clinical Medicine.
IRVING J. SPEAR, M. D., Professor of Neurology and Clinical Psychiatry.
C, HAMPSON JONES, M. D., C. M. (Edinburg), M. D., Professor of Hygiene and Public Health.
JOHN RUHRAH, M. D., Professor of Pediatrics.
CHARLES F. BLAKE, A. M., M. D., Professor of Proctology.
FRANK DYER SANGER, M. D., Professor of Diseases of Throat and Nose.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in America.

There for the first time in America dissecting was made a compulsory part of the curriculum; there instruction in Dentistry was first given (1837), and there were first installed independent chairs for the teaching of diseases of women and children (1867), and of eye and ear diseases (1873).

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for senior students first was established.

Clinical Facilities

The University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye cases. Additions were made to this building from time to time, but the demands on it became so great that a complete new building was erected. The hospital now is one of the finest owned and controlled by any medical school in the country. It is equipped with all modern conveniences and requirements for care of the sick and for clinical instruction of students of the University.

Besides its own hospital, the Medical School has control of the clinical facilities of the Mercy Hospital, in which were treated last year more than 30,000 persons, the Maternity Hospital of the University, the Maryland Lying-In Asylum, and the West End Maternity.

In connection with the University Hospital an out-door obstetrical clinic is conducted. During the past year 1202 cases were treated in the lying-in hospitals connected with the University.

Dispensaries and Laboratories

Three dispensaries associated with the University Hospital and Mercy Hospital, organized on a uniform plan in order that teaching may be the same in all. Each dispensary has departments of Medicine, Surgery, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Protology, Dermatology, Throat and Nose, and Tuberculosis. All students in their junior year work one day of each week in one of these dispensaries; all students in the senior year work one hour each day. About 85,000 cases treated last year give an idea of the value of these dispensaries for clinical teaching.

Laboratories conducted by the University purely for medical purposes are the Anatomical, Chemical, Experimental Physiology, Physiological Chemistry, Histology and Embryology, Pathology and Bacteriology, Clinical Pathology.

Prizes and Scholarships

To stimulate study among the candidates for graduation the Faculty of the School of Medicine offers a gold medal to the candidate who passes the best general examination. Certificates of Honor are awarded to the five candidates standing next highest.

A prize of $50 is given each year by Mrs. Jose L. Hirsch as a memorial to the late Jose L. Hirsch, former Professor of Pathology in this School. to the student in the third year who has done the most satisfactory work in Pathology.

The Dr. Samuel Leon Frank Scholarship was established by Mrs. Bertha Frank as a memorial to the late Dr. Samuel Leon Frank, an alumnus of the University, and entitles the holder to exemption from payment of the tuition fee for the year. It is awarded each year upon nomination of the Faculty "to a medical student, who in the judgment of the said Faculty, is of good character and in need of pecuniary assistance to continue his medical course."

From a bequest to the School of Medicine by the late Charles M. Hitchcock, M. D., an alumnus of the University, two scholarships have been established which entitle the holders to exemption from payment of tuition fees for the year.

These scholarships are awarded annually by the Faculty of Physic to students who have meritoriously completed the work of at least the first year of the curriculum in medicine, and who present to the Faculty satis-

factory evidence of good moral character and of inability to continue the course without pecuniary assistance.

The Randolph Winslow Scholarship, established by Prof. Randolph Winslow, M. D., LL. D., entitles the holder to exemption from the payment of the tuition fee of that year.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination of the Faculty of Physic, to "a needy student of the senior, junior or sophomore class of the Medical School. He must have maintained an average grade of 85 per cent in all his work up to the time of awarding the scholarship. He must be a person of good character and must satisfy the Faculty of Physic that he is worthy of and in need of assistance."

The University scholarship entitles the holder to exemption from payment of the tuition fee of the year and is awarded annually by the Faculty of Physic to a student of the senior class who presents to the Faculty satisfactory evidence that he is of good moral character and is worthy of and in need of assistance to complete his work.

The St. John's College Scholarship is awarded annually by the Faculty of Physic upon the nomination of the president of St. John's College, of Annapolis, Md.

It entitles the holder to exemption from the payment of the tuition fee of that year.

The Frederica Gehrmann Scholarship was established by bequest of the late Mrs. Frederica Gehrmann and entitles the holder to exemption from payment of tuition fees. This scholarship is awarded to a second-year student who at the end of the year passes the best practical examination in Anatomy, Physiology, Physiological Chemistry and Pharmacology. This examination is competitive.

The Karlinsky Scholarship, established by Mrs. Leo Karlinsky, in memory of her husband, Dr. Leo Karlinsky, entitles the holder to exemption from payment of tuition fee of that year.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination of the Medical Council, to "a needy student of the senior, junior, or sophomore class of the Medical School.

"He must have maintained an average grade of 85 per cent in all his work up to the time of awarding the scholarship.

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

Requirements for Entrance

Admission to the curriculum in medicine is by a completed Medical Student Certificate issued by the Registrar of the University. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admisson to any class.

The requirements for the issuance of the Medical Student Certificate are:

(a) The completion of a standard four-year high school course or the equivalent, and in addition.

(b) Two years, sixty semester, or ninety trimester hours, of college credits, including chemistry, biology, physics and English.

Women are admitted to the Medical School of this University.

Fees and Expenses

Following are the fees for students in the Medical School:

Matriculation fee (to be paid each year)	$ 5
Tuition fee (each year)	210

Estimated living expenses for students in Baltimore:

ITEMS	*Low*	*Average*	*Liberal*
Books	$27	$ 48	$ 75
College incidentals	20	20	20
Board, eight months	200	322	400
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
*Total	$386	$600	$820

*Students take the pre-medical work at College Park, for which there is no charge for tuition and for which other expenses are detailed in the first part of the catalogue.

The special bulletin of the School of Medicine may be obtained by addressing Dean J. M. H. Rowland, University of Maryland School of Medicine, Baltimore, Md., or The President, University of Maryland, College Park, Md.

School of Pharmacy

Faculty

E. F. KELLY, Phar. D., Dean
B. OLIVE COLE, Phar. D., Secretary.

PHARMACY—

E. F. Kelly, Phar D., Professor of Pharmacy.
J. Carlton Wolf, B. Sc., Phar. D., Professor of Dispensing.
John C. Krantz, Jr., Ph. C., Associate Professor of Pharmacy.
Louis J. Burger, Phar. G., LL. B., Lecturer on Pharmaceutical Jurisprudence.
Stanley L. Campbell, Phar G., Demonstrator in Dispensing.

MATERIA MEDICA—

David M. R. Culbreth, A. M. Phar. G., M. D., Professor Emeritus of Botany and Materia Medica.
Chas. C. Plitt, Phar. G., Sc. D., Professor of Botany and Materia Medica.
B. Olive Cole, Phar. D., Associate Professor of Botany and Materia Medica.

CHEMISTRY—

Neil E. Gordon, Ph. D., Professor of Chemistry.
L. B. Broughton, M. S., Professor of Organic Chemistry.
H. E. Wich, Phar. D., Associate Professor of Chemistry.

PHYSIOLOGY AND HYGIENE AND BACTERIOLOGY—

Robt. L. Mitchell, Phar. D., M. D., Professor of Physiology and Hygiene, and Bacteriology.
H. J. Maldeis, M. D., Associate Professor of Bacteriology.

GENERAL EDUCATIONAL SUBJECTS—

W. W. Cutchin, Phar. D., LL. B., Professor of Business Administration.
T. H. Spence, A. M., Professor of Modern Languages.
Harry Gwinner, M. E. Professor of Mathematics.
F. M. Lemon, A. M., Professor of English.
O. G. Eichlin, B. S., Professor of Physics.

The School of Pharmacy was organized in 1841, largely at the instance of members of the Faculty of Medicine, and, for a time, the lectures were delivered at the Medical School. Later it became separated and continued an independent organization until, as the Maryland College of Pharmacy, it finally became an actual part of the University. With but one short intermission, previous to 1865, it has continuously exercised its functions as a teaching school of pharmacy.

Reference to its records show it to have been among the first, in every instance, to adopt advance methods, and the standards it has always set and maintained have equalled the highest.

Location

The School of Pharmacy is located at the northeast corner of Lombard and Greene Streets, with the Schools of Medicine, Law and Dentistry.

Policy and Degrees

From the very beginning of its career the chief purpose of this college has been to prepare its matriculants for the intelligent practice of pharmacy in the retail drug store. It does not, howevere, overlook the fact that there exist other divisions of the profession and that all need to be scientifically taught.

The School has so arranged its curriculum as to give a well-ordered foundation for a pharmaceutical specialist in two years. Upon completion of this two-year curriculum, the student is graduated with the degree of Graduate in Pharmacy, Ph. G.

Students who continue their studies for one year after completion of the basic two years' work will receive the degree of Pharmaceutical Chemist, Ph. C. Students of other colleges who wish to pursue this advanced training must have obtained the Ph. G., diploma from a college holding membership in the American Conference of Pharmaceutical Faculties and must meet the entrance requirements of this school.

In the course set forth, all the work as specified in the Pharmaceutical Syllabus is included and in addition general educational subjects sufficient to give successful students full collegiate credit.

Women are admitted on the same basis as men.

Recognition

The School of Pharmacy holds membership in the American Conference of Pharmaceutical Faculties and is registered in the New York Department of Education, and all other states which maintain registration bureaus. The American Conference of Pharmaceutical Faculties is organized to promote pharmaceutical education, and all schools holding membership in it are required to maintain certain standards for entrance and graduation.

Requirements for Matriculation

The applicant must be not less than seventeen years old and must have completed a four year standard high school course, or its equivalent.

Admission to the course in pharmacy is by certificate issued by the Registrar of the University of Maryland, Lombard and Greene Streets, Baltimore, Md. The certificate is issued on the basis of credentials, or by examination, or both.

Applicants whose credentials do not meet the requirements must stand an examination in appropriate subjects to make up the required number of units. The fee for such examination is one dollar per subject; five dollars for the entire number of subjects.

Credit will be given for pharmaceutical subjects to only those students coming from schools of pharmacy holding membership in the American Conference of Pharmaceutical Faculties, provided they present a proper certificate of the satisfactory completion of such courses, and meet the entrance requirements of this school. Credit for general educational subjects will be given to those students presenting evidence of having completed work of equal value.

Requirements for Graduation

1. The candidate must possess a good moral character.
2. He or she must have attended two (Ph. G.) or three (Ph. C.) sessions at the school of pharmacy, the last in *either case* at this school.
3. He or she must have passed an examination in all lecture and laboratory instructions.
4. On or before May 1st the candidate must present the graduation fee.

Department of Military Science and Tactics

Reserve Officers' Training Corps

The work in this department is based upon the provisions of Special Regulations, No. 44, War Department, 1921.

Authorization

An infantry unit of the Senior Division of the Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended by the acts of June 3, 1916, and September 8, 1916.

Object

The primary object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. It is intended to attain this object during the time that students are pursuing their general or professional studies with the least practical interference with their civil careers, by employing methods designed to fit men, physically, mentally and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will aid greatly in the development of better citizens.

Required to Take Instruction

All male students, if citizens of the United States whose bodily condition indicates that they are physically fit to perform military duty or will be upon arrival at military age, whether pursuing a four-year or a two-year course of study, are required to take for a period of two years, as a prerequisite to graduation, the military training required by the War Department.

Advance Work

Students who complete the Basic Course satisfactorily and who are recommended by the Professor of Military Science and Tactics, and whose application is approved by the President, may continue their military training for a period of two years in the Advanced Course.

Time Allotted

For first and second year, basic course, three periods a week of not less than one hour each are devoted to this work, of which at least one hour is utilized for theoretical instruction.

For third and fourth years, advanced courses, elective, five periods a week of not less than one hour each are devoted to this work, of which at least three periods are utilized for theoretical instruction.

Physical Training

Physical training forms an important part in military instruction, and it is the policy of the Military Department to encourage and support the physical training given by civilian teachers, thus co-operating in an effort to promote a vigorous manhood.

Physical Examination

All members of the Reserve Officers' Training Corps are required to be examined physically at least once after entering the University.

Uniforms

Members of the Reserve Officers' Training Corps must appear in proper uniforms at all military formations and at other specified times.

Uniforms for the Reserve Officers' Training Corps will be furnished free by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features. Such uniforms must be kept in good condition by the student. They are the property of the Government and though intended primarily for use in connection with military instruction may be worn at any other time unless the regulations governing their use are violated. The uniform can not be worn in part. Uniforms will be returned to the Military Department at the end of the year, and before, if the student leaves the University.

Commutation

Those students who elect the advanced course and who have signed the contract with the Government to continue in the Reserve Officers' Training Corps for the two remaining years of the advanced course are entitled to commutation of subsistence from and including the date of contract until they complete the course at the institution. Commutation amounts to approximately $110.00 a year.

Summer Camps

An important and excellent feature of the Reserve Officers' Training Corps is the summer camp. In specially selected parts of the country camps are held for a period not exceeding six weeks for students who are members of the Reserve Officers' Training Corps. These camps are under the strict supervision of army officers and are intended primarily to give a thorough and comprehensive practical course of instruction in the different arms of the service.

Parents may feel assured that their sons are carefully watched and safeguarded. Wholesome surroundings and associates, work and healthy

recreation are the key-note to contentment. Social life is not neglected and the morale branch exercises strict censorship over all social functions.

The attendance at summer camps is compulsory only for those students who are taking the advanced course. The War Department recommends that as many basic students as possible attend the summer camps.

The students who attend the summer camps are under no expense. The Government furnishes transportation from the institution to the camp and from the camp to the institution, or to the student's home, unless the mileage is greater than that from the camp to the institution. In this case, the amount of mileage from the camp to the institution is allowed the student. Quarters and food are furnished. The advanced Course men, in addition to receiving quarters and food, are paid One Dollar per day for each day spent in camp.

Commissions

(a) Each year upon completion of the Advanced Course, students qualified for commissions in the Reserve Officers' Corps will be selected by the heads of the institution and the professor of Military Science and Tactics.

(b) The number to be selected from each institution and for each arm of the service will be determined by the War Department.

Credits

Military instruction at this University is on a par with other university work and the requirements of this department are proficiency the same as with other departments.

Students who have completed satisfactorily the prescribed training with a unit of the S. A. T. C. may be credited with one year of the Basic Course prescribed for the R. O. T. C., and those students who have received military training at any educational institution under the direction of an army officer detailed as professor of military science and tactics may receive credit for instruction equivalent to that given in the senior division R. O. T. C., if over fourteen years of age.

Basic Course, M. I.

First year (generally given to freshmen and the first-year students in the two-year course). Two credit hours per term.

Second year (generally given to sophomores and the second-year students in the two-year course). Two credit hours per term.

Advanced Course, M. I. (elective)

Third year (generally given to juniors). Three credit hours per term.
Fourth year (generally given to seniors). Three credit hours per term.

Military Department

DESCRIPTION OF COURSES

M. I. 101, Basic R. O. T. C.—Two credit hours each term. Freshman year.

The following subjects are covered:

First Term

1. Physical Training (Practical).
2. Military Courtesy and Customs of the Service (Theoretical and Practical).
3. Infantry Drill, School of Soldier and Squad (Theoretical and Practical).

Second Term

1. Physical Training (Practical).
2. Infantry Drill, School of the Squad and Platoon (Theoretical and Practical).
3. Scouting and Patroling (Theoretical and Practical).
4. Rifle Marksmanship, to include Gallery Practice and Range Practice (Theoretical and Practical).
5. Personal Hygiene (Lectures).
6. Infantry Equipment (Practical).

Third Term

1. Infantry Drill, School of Platoon and Company (Theoretical and Practical).

M. I. 102, Basic R. O. T. C.—Two credit hours each term. Sophomore Year.

The following subjects are covered:

First Term

1. Physical Training (Practical).
2. Infantry Drill, School of the Soldier, Squad, Platoon and Company (Theoretical and Practical).
3. Military Map Reading and Sketching (Theoretical and Practical).

Second Term

1. Infantry Weapons, viz: Bayonet, Hand Grenades, Rifle Grenades, Automatic Rifles (Theoretical and Practical).
2. Military Hygiene, Sanitation and First Aid (Theoretical and Practicable).

Third Term

1. Musketry (Theoretical and Practical).
2. Infantry Drill, School of Company (Practical).
3. Physical Training (Practical).

M. I. 103, Advanced R. O. T. C.—Three credit hours each term. Junior Year.

The following subjects are covered:

First Term

1. Physical Training (Practical).
2. Infantry Drill, Duties of Instructors, Command and Leadership (Theoretical and Practical).
3. Field Engineering (Theoretical and Practical).

Second Term

1. Military Law (Theoretical and Practical).
2. Accompanying Weapons, viz., Machine Guns, 37 m.m. Guns and Mortars (Theoretical and Practical).

Third Term

1. Physical Training (Practical).
2. Infantry Drill, Duties of Instructors, Command and Leadership (Theoretical and Practical).
3. Field Engineering (Theoretical and Practical).
4. Problems in Use of Accompanying Weapons.

M. I. Advanced R. O. T. C.—Three credit hours each term. Senior Year.

The following subjects are covered:

First Term

1. Physical Training (Practical).
2. Infantry Drill, Duties of Instructors, Command and Leadership (Theoretical and Practical).
3. Minor Tactics (Theoretical and Practical).

Second Term

1. Minor Tactics (Theoretical and Practical).
2. Administration, Army Paper Work (Theoretical and Practial).
3. Military History and Policy of the United States (Theoretical).

Third Term

1. Minor Tacics (Theoretical and Practical).
2. Physical Training (Practical).
3. Infantry Drill, Duties of Instructors, Command and Leadership (Theoretical and Practical).
4. Pistol Markmanship, to include Range Practice (Theoretical and Practical).

Department of Physical Education and Recreation

The Department of Physical Education and Recreation has been organized to control all physical training, recreation, intramural, and intercollegiate athletics. All work is closely co-ordinated and the ideal is to see that every man in the institution gets opportunities to take part in competitive sports. The plan under which the department is to operate may be summed up as follows:

1. A series of exercises arranged for every student in the institution and compulsory for all, the exercises to be based on mass exercises common in Germany and Scandinavian countries. Neither the German nor Scandinavian system is to be used in its entirety, but a combination of the heavy gymnastic drills of the former with the lighter squad drills of the latter. All students will be given physical examination and placed in various classes according to their individual physical needs. Students will receive different kinds of work and be encouraged to take part in those games which provide the exercise of which they are most in need.

2. A general system of intramural athletics is carried out under a regular schedule with teams representing different units of the University. All students take part in one or more of these branches of sport and the the University encourages enough sports to give each an opportunity. It is the aim of each class to have its own wrestling team, basket-ball team, baseball team, volley-ball team, track team, and so on for just as many teams as their are students to fill the positions. The games between these teams are carried out with regularity of schedule and supervision. Besides these, there are general competitions such as cross-country runs and interclass track meets in which representatives of all classes may compete at the same time. A regular playground is in process of construction on which will be available tennis courts, volley-ball courts, tether ball polls, stakes for pitching quoits, etc.

3.All physical training of the students, including mass exercises, intramural sports, intercollegiate competitions, and military training, are a part of the general educational system of the University.

For the present practically all general training, such as comes under the head of gymnastics and squad exercises, is conducted under the direction of the Military Department.

A new gymnasium and stadium, to be constructed this summer, will add greatly to the facilities for general athletics and physical education. Combined they will give the University the most modern athletic plant in the South.

Degrees Conferred 1921

Honorary Degrees

Ferdinand Foch, Marshal of France, Doctor of Laws
Henry Cantwell Wallace, Doctor of Agriculture
Philander Priestly Claxton, Doctor of Laws
Lee Cleveland Corbett, Doctor of Agriculture
Milton Whitney, Doctor of Agriculture

TESTIMONIALS OF MERIT

For distinguished achievement in the promotion of the agricultural interest of Maryland

John Haines Kimble	Port Deposit, Maryland
Rush R. Lewis	Frederick, Maryland
William Bernard McGrath	Washington, District of Columbia
George P. Radebaugh	Bynum, Maryland

The Graduate School

Doctor of Philosophy

Clyde Harold Bailey	St. Paul, Minnesota

Master of Science

Walter Naphtali Ezekiel	Berwyn, Maryland
John Paul Jones	Davidsonville, Maryland
John Holmes Martin	Corvallis, Oregon
Erston Vinton Miller	Hagerstown, Maryland
William Joseph Sandow	Washington, District of Columbia
Arthur Mathias Smith	College Park, Maryland
Thomas Ray Stanton	Hyattsville, Maryland

College of Agriculture

Bachelor of Science

Harriet Willete Bland	Sparks, Maryland
Edward Franklin Holter	Middletown, Maryland
William Clayton Jester	Wilmington, Delaware
Alexander Macdonald	Washington, District of Columbia
DeWitt Prather Perry	Clearspring, Maryland
Otis Spooner Twilley	Hurlock, Maryland
Henry Lafayette Umbarger	Bel Air, Maryland
William Paul Walker	Mt. Airy, Maryland
Charles Philip Wilhelm	Baltimore, Maryland

Certificates Issued in the Two-Year Course in Agriculture

Thomas Ezra Alderton	Takoma Park, Maryland
George Anthony Crone	Jessup, Maryland
John Edwin Muncaster, Jr.	Rockville, Maryland
Howard Whiteford Turner	White Hall, Maryland
Marvin Dwight Umbarger	Bel Air, Maryland

College of Arts and Sciences

Bachelor of Arts

Charles Walter Cole	Towson, Maryland
Austin Campbell Diggs	Baltimore, Maryland
Thomas Clay Groton	Pocomoke, Maryland
Edwin King Morgan	Washington, District of Columbia
Frederick Knight Slanker	Washington, District of Columbia

Bachelor of Science

Sterling Ely Abrams	Jersey City, New Jersey
Edmund Calvin Donaldson	Laurel, Maryland
Francis Joseph Frere	Tompkinsville, Maryland
Edgar Bennett Starkey	Sudlersville, Maryland
Leonard Herman Thawley	Laurel, Maryland

School of Dentistry

Doctor of Dental Surgery

Walter Anders Anderson	Baltimore, Maryland
Edward Conroy Berg	Newark, New Jersey
Harvey Donald Brown	Millville, New Jersey
Nathan Byer	Trenton, New Jersey
Louis Maxwell Cantor	New Haven, Connecticut
Daniel Joseph Casey	Wilmington, Delaware
Acacio Ricalo Cisneros	Cuba
Walter Buckey Clemson	Baltimore, Maryland
Arthur Corso	Cuba
William Hyde Cowley	Salt Lake City, Utah
Frank Willard Davis	Waynesville, North Carolina
Leonard Isaac Davis	Barnesville, Maryland
Daniel Edward Doyle	North Attleboro, Massachusetts
Bennett Hammond	Pennsylvania
Bert Lawrence Henchey	Bennington, Vermont
Charles Highstein	Baltimore, Maryland
Fay Lee Hussey	Berkley, Virginia
Jacob Lubore	District of Columbia
Victor Bruce McLaughlin	Mason Dixon, Pennsylvania
Jack Walter Malkinson	New Haven, Connecticut

William Paul Martin	Burlington, North Carolina
William Siebert Moore	Brooklyn, New York
Louis Notes	District of Columbia
Francisco G. Garcia Pelliccia	Porto Rico
Daniel Lynton Roland	Reading, Pennsylvania
Louis Burton Slifkin	Bloomfield, New Jersey
Carl Joseph Stern	Walton, New York
Charles Henry Teague	Madison, North Carolina
Neil Eugene Thalaker	Petersburg, West Virginia
Joseph A. Themper	New Haven, Connecticut
Harold Van Winkle	Passaic, New Jersey
Joseph William Voelker	District of Columbia

College of Education
Bachelor of Science

Leonard Maxwell Goodwin	Potsdam, New York
Julian Ralph Graham	Barclay, Maryland
Robert Van Rensselaer Haig	Riverdale, Maryland
Cecil Kefauver Holter	Jefferson, Maryland

Bachelor of Arts

Charles LeRoy Mackert	Sunbury, Pennsylvania

Special Teachers' Diplomas

Harry Christian Ball	Baltimore, Maryland
Harriet Willette Bland	Sparks, Maryland
Letha Gordon Edmonds	Rockville, Maryland
Julian Ralph Graham	Barclay, Maryland
Robert Van Rensselaer Haig	Riverdale, Maryland
Cecil Kefauver Holter	Jefferson, Maryland
Charles LeRoy Mackert	Sunbury, Pennsylvania
John Frederick Sendelbach	Baltimore, Maryland
Ferdinand Charles Smith	Baltimore, Maryland
Paul Alexander Wilhide	Baltimore, Maryland

College of Engineering
Bachelor of Science

James E. Dingman	Berwyn, Maryland
John Hartshorn Eiseman	Washington, District of Columbia
William Thomas Gardner	Clearspring, Maryland
Julius Carl Hamke	College Park, Maryland
Robert Wilhelm Heller	Annapolis, Maryland
Herbert Rowles Peddicord	Dickerson, Maryland
Robert M. Rausch	Washington, District of Columbia

Joseph Gassaway Reading	Rockville, Maryland
Herman Huyette Sener	Chewsville, Maryland
John Walter Smith	Norfolk, Virginia
Leo William Snyder	Washington, District of Columbia
James Hammond Starr	Washington, District of Columbia
Nicholas Volney Stonestreet	Rock Point, Maryland
Jeremiah Henry Sullivan	Newburyport, Massachusetts
Richard Branson Thomas	Washington, District of Columbia

Certificate in Two-Year Course in Mechanic Arts

Edward Fite Stanfield	Roslyn, Maryland

College of Home Economics
Bachelor of Science

Letha Gordon Edmonds	Rockville, Maryland

The School of Law
Bachelor of Laws

Joseph Frank Batty, Jr.	Baltimore, Maryland
Don Booze	Baltimore, Maryland
John Franklin Davis	Baltimore, Maryland
Harry Ames Drummond	Pungateague, Virginia
John William Farrell	Baltimore, Maryland
Leo Fessenmeir	Baltimore, Maryland
Hilary Wall Gans	Baltimore, Maryland
George Lawrence Golder, Jr.	Baltimore, Maryland
Charles Henry Gontrum	Baltimore, Maryland
Julius Grossman	Baltimore, Maryland
Paul Maurice Higinbothom	Baltimore, Maryland
Albert Charles Hoffman	Ellicott City, Maryland
George S. Jones	Baltimore, Maryland
Norris Carroll King	Baltimore, Maryland
Edward L. Koontz	Baltimore, Maryland
William F. Laukaitis	Baltimore, Maryland
Charles Philip McEvoy	Baltimore, Maryland
George Maurice Mullen	Baltimore, Maryland
Nathaniel Samuel Nachlas	Baltimore, Maryland
Arthur Seymour O'Brien	Baltimore, Maryland
Howard Jesse Ring	Baltimore, Maryland
Cornelius Roe	Baltimore, Maryland
William Charles Rogers	Baltimore, Maryland
Howard Montague Rollins, Jr.	Arizona
Louis J. Sagner	Baltimore, Maryland
John Scheiner	Baltimore, Maryland
John Oliver Seiland	Baltimore, Maryland

Ernest E. Stanley	Baltimore, Maryland
Joseph W. Stallings	Baltimore, Maryland
David Stein	Baltimore, Maryland
Theodore Cooke Waters	Baltimore, Maryland
George Philips Welzant	Baltimore, Maryland
Francis B. Wiers	Baltimore, Maryland

The School of Medicine
Doctor of Medicine

John Forsyth Aubrey	Baltimore, Maryland
Francis Lucian Badagliacca	Paterson, New Jersey
Bruce Barnes	Hawthorne, New Jersey
Carl Fisher Benson	Baltimore, Maryland
John Ralph Bernardo	Wilmington, Delaware
Vincent Bonfiglio	Baltimore, Maryland
Jogesh Chandra Bose	Baltimore, Maryland
Earl Edgar Broadrup	Cumberland, Maryland
Andres G. Castro	Costa Rica
Oscar G. Costa	Porto Rico
Samuel Hearn Culver	Delmar, Delaware
Herman Jacob Dorf	Hunter, New York
C. F. Fisher	Parkersburg, West Virginia
Daniel Sebastian Fisher	Baltimore, Maryland
Charles J. Foley	Havre de Grace, Maryland
Joseph P. Franklin	Bham, Alabama
Leon Freedom	Baltimore, Maryland
Willets Walton Gardner	Centre Moriches, New York
Kyle Wood Golley	Hamilton, Maryland
J. Stanley Grabill	Baltimore, Maryland
John Willis Guyton	Baltimore, Maryland
Cyrus Eugene Hawks	Lambsburg, Virginia
Legan Henry Hobgood	New Bedford, Massachusetts
Albert Salomon Hoheb	Porto Rico
Julius I. Holofcener	Baltimore, Maryland
Albert Jaffe	Baltimore, Maryland
Baxter S. John	Shawsville, Virginia
Vincent Vernon Joska	Baltimore, Maryland
George Richardson Joyner	Suffolk, Virginia
Daniel Francis Keegan	Bridgeport, Connecticut
Richard Joseph Kemp	Granite, Maryland
Louis Lass	Brooklyn, New York
Benjamin Luban	Brooklyn, New York
Arley Von McCoy	Mannington, West Virginia
Ezequiel Martinez	Porto Rico
Stanley William Matthews	Rocky Mount, North Carolina

Thomas Rutter O'Rourk	Sparrow's Point, Maryland
Frank Anthony Pacienzo	Baltimore, Maryland
Moses Paulson	Baltimore, Maryland
Edgar Allen Poe Peters	Louisa, Kentucky
Harold C. Pillsbury	Baltimore, Maryland
Ralph Johnson Plyler	Cleveland, North Carolina
Joseph Pokorny	Baltimore, Maryland
Norberto A. Quinones	Porto Rico
Francis A. Reynolds	Boston, Massachusetts
Ferdinand A. Ries	Baltimore, Maryland
Harold A. Romilly	Rapidan, Virginia
James Barry Ryon	Bowie, Maryland
Fred Sabin	Syracuse, New York
Philip J. Savage	New London, Connecticut
Jesmond William Schilling	Erie, Pennsylvania
Thomas Waller Seay	Spotsylvania, C. H., Virginia
Solomon Sherman	Baltimore, Maryland
Elliott Walter Shircliff	Cumberland, Maryland
Felix S. Shubert	Ranshow, Pennsylvania
John Augustus Skvarla	Passaic, New Jersey
Jacob Long Sowers	Linwood, North Carolina
S. Gordon Stone	Cleveland, Ohio
John Valentine Szczerbicki	Baltimore, Maryland
Stanley J. Tilghman	Parsonsburg, Maryland
Louis Michael Timko	Northampton, Pennsylvania
Herman Ernest Wangler	Syracuse, New York
Edwin E. Ward	Crisfield, Maryland
William Ferdinand Weinkauf	Corunna, Michigan
George Edward Wells	Baltimore, Maryland
Paul Foreman Wiest	Rippon, West Virginia
James Herbert Wilkerson	Baltimore, Maryland
Mortimer H. Williams	Parksley, Virginia
W. Wellford Wilson	Baltimore, Maryland
James Clinton Wolfe	Bloomfield, New Jersey
Leslie Arno Yaeger	Baltimore, Maryland

Graduates—School for Nurses

Louise B. Bateman	Bel Air, Maryland
Helen Childs	Baltimore County, Maryland
Mary Fisher	Lonaconing, Maryland
Norma Gaver	Myersville, Maryland
Ruth Gorman	Mt. Airy, Maryland
Claribel Hampton	Boyson City, North Carolina
Isabelle Hanna	Cambridge, Maryland
Kate Hogshead	Greensboro, North Carolina
Mary Belle McDaniel	Halethorpe, Maryland

Blanche Lee Martin	Greensboro, North Carolina
Christine Minnis	Connellsville, Pennsylvania
Susan P. Neady	Waynesboro, Pennsylvania
Eugenia Reamy	Edwardsville, Virginia
Zadieth Violet Reese	Princess Anne, Maryland
Ruby Reister	Ashville, North Carolina
Jessie Geraldine Rhodes	Forney, North Carolina
Julia Rebecca Smith	Taneytown, Maryland

The School of Pharmacy
Graduate in Pharmacy

Charles Rose Anderson	Pikesville, Maryland
I. Ellis Berman	Baltimore, Maryland
Samuel Block	Baltimore, Maryland
Stanley Lewis Campbell	Baltimore, Maryland
Frank Joseph Donohue, Jr.	Clarksburg, West Virginia
Fred Wm. Downey	District of Columbia
Thomas E. R. Fields	Pikesville, Maryland
Isaac Flom	Baltimore, Maryland
Gaither Calvin Gaver	Myersville, Maryland
Marvin Colquitte Haynes	Dutton, Virginia
Eric Bozeman Hill	Hickory, Mississippi
Norman Monroe Johnson	Ellicott City, Maryland
Joseph Chester Kaluska	Baltimore, Maryland
Frank William Karwacki	Baltimore, Maryland
Albert George Kaylus	Baltimore, Maryland
George Benner Kelly	Winchester, Virginia
Ernest Ward Looney	Sponcci, West Virginia
William Stuart Maginnis	Baltimore, Maryland
Philip Thomas Marecki	Baltimore, Maryland
Sydney Isadore Marks	Baltimore, Maryland
Eugene Gibbons Morris	Baltimore, Maryland
Robert Lodge Paxson	Round Hill, Virginia
Robert Adrian Pilson	Baltimore, Maryland
Clarence Pross	Baltimore, Maryland
Joseph Jesse Rosenberg	Baltimore, Maryland
Donald Alexander Shannon	Baltimore, Maryland
William Chester Shoemaker	Hampstead, Maryland
Roy Aloysius Sprucebank	Sparrow's Point, Maryland
Evelyn Wegad	Russia
Harry Weinberg	Baltimore, Maryland
A. Henry Weinstein	Baltimore, Maryland
Benj. Nicholson Williams	Greenwood, South Carolina
Robert Onla Wooten	Ellicott City, Maryland

Elected Members of the Phi Kappa Phi, the Honorary Fraternity

John Hartshorn Eiseman	Washington, District of Columbia
Joseph Gassaway Reading	Rockville, Maryland
Herman Huyett Sener	Chewsville, Maryland
Edgar Bennett Starkey	Sudlersville, Maryland
William Paul Walker	Mt. Airy, Maryland

Medals and Prizes Awarded 1921

For Excellence in Debate. Medal offered by the Alumni Association

Charles Walter Cole, Towson, Maryland

The Goddard Medal, for Excellence in Scholarship and Moral Character, to student of Prince George's County, offered by Mrs. Annie K. Goddard James

Charles Edward White, College Park, Maryland

The Oratorical Association of Maryland Colleges offers each year gold medals for first and second places in an Oratorical Contest

Medal for second place awarded to

Robert Malcolm Watkins, Mt. Airy, Maryland

Citizenship Medal offered by Mr. H. C. Byrd, Class of 1908

John Walter Smith, Norfolk, Virginia

Athletic Medal offered by the Class of 1908

Andrew Nelson Nisbet

For Excellence in Debate, "President's Cup," offered by Dr. H. J. Patterson

The New Mercer Literary Society

Awards of Military Commissions

Charles Walter Cole	Major
Frederick Knight Slanker	Major
Charles Eugene Darnall	Captain
Robert Van Rensselaer Haig	Captain
Hughes Shank	First Lieutenant
Edgar Farr Russell	First Lieutenant
Mortimer Bryan Morehouse	First Lieutenant
Augustus Webster Hines	First Lieutenant
Otto Philip Henry Reinmuth	First Lieutenant
Paul Sardo Frank	First Lieutenant
George Francis Smith	Second Lieutenant
Robert Nicholas Young	Second Lieutenant
James Atlee Ridout	Second Lieutenant
Asa Cicero Miller	Second Lieutenant
Gerald Grosh Remsberg	Second Lieutenant
Jesse Marion Huffington	Second Lieutenant
Morrison McDowell Clark	Second Lieutenant
John Austin Moran	Second Lieutenant
Edwin Bennett Filbert	Second Lieutenant

School of Dentistry

University Gold Medal for Highest General Average

Jack Walter Malkinson, *New Haven, Connecticut*

Honorable Mention for Second Highest Average—

Francisco G. Garcia Pelliccia, Porto Rico

School of Pharmacy

Gold Medal for General Excellence

Clarence Pross, Baltimore, Maryland.

Simon Prize for Practical Chemistry

Clarence Pross, Baltimore, Maryland

Honorable Mention—

Frank William Karwacki Thomas E. R. Fields

and Stanley Lewis Campbell

School of Medicine

University Prize—Gold Medal

Oscar G. Costa, Porto Rico

Certificates of Honor

James Herbert Wilkerson	Baltimore, Maryland
Charles Frederick Fisher	Baltimore, Maryland
Ferdinand A. Ries	Baltimore, Maryland
John Ralph Bernado	Wilmington, Delaware
Jogesh Chandra Bose	Baltimore, Maryland

In the third year the Jose L. Hirsch prize of $50.00 was awarded to Oscar G. Costa for the best work in Pathology during the second and third years.

Clinical Medicine Prize

Charles F. Fisher, Baltimore, Maryland

BATTALION ORGANIZATION FOR 1921-1922

BATTALION STAFF

M. M. CLARK, Major, R. O. T. C., Commanding
G. E. GIFFORD, First Lieutenant, Battalion Adjutant

COMPANY OFFICERS AND NON-COMMISSIONED OFFICERS

COMPANY A	COMPANY B	CAMPANY C	COMPANY D
Captains			
R. N. YOUNG	A. W. HINES	E. B. FILBERT	P. S. FRANK
Additional Captains			
G. F. SMITH	E. F. RUSSELL	J. A. RIDOUT	O. P. H. REINMUTH
H. A. SHANK	J. A. MORAN	G. G. REMSBERG	J. M. HUFFINGTON
First Lieutenants			
G. F. POLLOCK	K. B. CHAPPELL	C. E. WHITE	J. W. WISNER
A. G. WALLIS	J. P. SCHAEFER	P. T. KNAPP	J. F. CLAGETT
Second Lieutenants			
L. F. SCHOTT	H. M. TERRY	E. C. EMBREY	W. H. YOUNG
C. S. COOK	C. M. BREWER	E. A. GRAVES	E. M. RICHARDS
M. C. ALBRITTAIN	R. E. MARKER	J. W. MUMFORD	G. A. WICK
	H. I. STITES		W. M. JONES

Non-Commissioned Staff Officers

D. K. ENDSLOW, Battalion Sergeant Major
F. T. CHESNUT, Battalion Supply Sergeant

First Sergeants			
T. J. MCQUADE	B. H. ROCHE		G. M. CLARKE
Supply Sergeants			
J. M. MATTINGLY		H. M. WALTER	J. M. LANKFORD
Sergeants			
A. R. SCHUMAN	J. M. SENEY	H. O. YATES	F. NEWLAND
W. H. WEBER	C. W. WENGER	C. R. HALL	W. D. BARTLETT
T. H. HERLIHY	H. L. DAVIS	J. P. CONWAY	R. D. NEWMAN
R. L. RISSLER		J. F. BARTON	R. F. HALE
M. F. BROTHERS			T. J. HOLMES
Corporals			
L. COHEE	M. H. HOWARD	J. M. LINK	W. B. PENN
J. H. FOARD	W. B. HILL	J. L. MECARTNEY	J. C. REISINGER
J. J. FOSTER	G. JOHNSON	W. P. NEWCOMER	R. G. ROTHGEB
C. H. GEIST	W. A. KING	S. C. ORR	
W. J. GLENN	D. S. LESHER	J. P. PARRAN	

Register of Students

COLLEGE OF AGRICULTURE

SENIOR CLASS

Avery, Helena D., Washington, D. C.
Browne, Edward L., Chevy Chase
Ezekiel, Bertha B., Berwyn
Fisher, Henry S., Hillsboro
Fusselbaugh, William P., Baltimore
Gurevich, Henry J., Washington, D. C.
Gurevich, Morris J., Washington, D. C.
Holder, Thomas D., Vienna
Huffington, Jesse M., Eden (Somerset)
Kirby, William W., Berwyn
Malcolm, Wilbur G., Barton
Moran, John A., Frederick
Newell, Sterling R., Washington, D. C.
Painter, John H., Washington, D. C.
Reynolds, Clayton, Oxford, Pa.
Smith, George F., Big Spring
Snyder, James H., Lewistown
Stabler, Lawrence J., Washington, D. C.
Sutton, Robert L., Ballston, Va.

JUNIOR CLASS

*Bishop, John, Washington, D. C.
Burdette, Robert C., Gaithersburg
Dunning, Ernest C., Baltimore
Duvall, William M., Baltimore
Frank, Paul S., College Park
Fuhrman, Ruth, Washington, D. C.
*Hancock, Hugh, Huddleston, Va.
Harley, Clayton P., Royersford, Pa.
Hickey, William F., Delmar
*Holland, Arthur H., Cartersville, Va.
Huffard, Charles L., Wytheville, Va.
Lescure, John M., Harrisburg, Pa.
Melroy, Malcolm B., Washington, N. J.
Miller, Thomas K., Havre de Grace
Mumford, John W., Jr., Newark
Rosenberg, Charles I., Hyattsville
Shaffer, Harry H., Upperco
Skilling, Francis C., Baltimore
Trivanovitch, Vaso, Zagreb, Jugoslavia
Troy, Virgil S., Centreville

SOPHOMORE CLASS

Anderson, Wilton A., Bristol, Tenn.
Bacon, Rankin S., Glencoe
Barton, J. Frank, Centreville
Embrey, Everett C., Washington, D. C.
Endslow, David K., Mt. Joy
Geist, Charles H., Upperco
Hale, Roger F., Freeland
Harlan, Paul B., Churchville
Hawthorne, Noah B., Round Hill, Va.
Kaufman, Edward L., Baltimore
King, Willard A., Washington, D. C.
Ludlum, Samuel L., Chevy Chase
McQuade, Thomas J., Washington, D. C.
Mecarteny, John L., Vaucluse, Va.
Miller, Robert H., Burtonville
Nichols, Norris N., Delmar, Del.
Nichols, Robert S., Delmar, Del.
Penn, William B., Clinton
Powell, William D., Woodsboro
Prince, Charles E., Baltimore
Quaintance, Howard W., Washington, D. C.
Richardson, Edward M., Washington, D. C.
Roche, B. Hamilton, Baltimore
Rothgeb, Russell G., Luray, Va.
Rowe, Taylor P., Fredericksburg, Va.
Sleasman, Arthur R., Smithsburg
Stuart, Leander S., Pepperill, Mass.
Tarbell, William E., Baltimore
Weber, Wilhelm H., Oakland
Yates, Harry O., Abington, Pa.

FRESHMAN CLASS

Baker, John H., Winchester, Va.
*Banfield, Frank W., Washington, D. C.
Bouis, George E., Mt. Washington
*Brannon, Thomas C., Washington, D. C.
Bromley, Walter D., Pocomoke
Buckman, Horace D., Accotink, Va.
Bull, Frederick L., Pocomoke
Burdette, Sarah B., Martinsburg, W. Va.

*Church, Carey F., Barnard, Vt.
Cluff, Francis, Pocomoke
Coney, William J., Baltimore
*Coyle, John W., Syracuse, N. Y.
Cromwell, Richard H., Ruxton
Dawson, Walker M., Silver Spring
Dickey, David D., Baltimore
Dietz, George J., Baltimore
Dorsett, Telfair B., Forestville
England, Howard A., Rising Sun
Faber, John E., Washington, D. C.
*Harper, Floyd H., College Park
Heine, George R., Washington, D. C.
Hough, John F., Mt. Rainier
Johnson, J. Dorsey, Cambridge
*Lowman, Clarence A., Funkstown
*Mitchell, William, Berwyn
Myers, Victor S., Waynesboro, Pa.
Nielson, Knute W., McLean, Va.
Pearce, Wilbur, Sparks
Price, M. Myron, Queenstown
Skirven, James F., Chestertown
Sullivan, John F., Washington, D. C.
Summerill, Richard L., Penn's Grove, Pa.
*Tillinghast, Jesse L., Cherrydale, Va.
Vivanco, Carlos D., Washington, D. C.
Walker, Dwight T., Mt. Airy
Waters, Joseph B., Riverdale
Williams, Richard E., Washington, D. C.
*Wood, Ellsworth, Washington, D. C.
*Worthington, Leland G., Hagerstown
Zalesak, Emmanuel F., Washington, D. C.

TWO-YEAR AGRICULTURE CLASS

*Allen, Kenneth, Berwyn
*Appel, Carl S., Baltimore
*Batson, Lawrence D., Brentwood
Beall, Clarkson J., Morristown, N. J.
Beckenbaugh, John H., Sharpsburg
*Bollinger, Perry R., Reisterstown
*Bonnett, Harold M., E. St. Johnsbury, Vt.
*Bray, Walter C., Emporia, Va.
Buchheister, Gustav A., Upper Marlboro
*Campbell, Thomas A., Lanham
*Chassagne, Leo J., Highlandtown
*Cherry, Joseph C., Brownsville, Pa.
Clay, Winston C., College Park
Coale, Hargrave H., Aberdeen
*Cooper, Charles H., College Park
*Davis, John H., Washington, D. C.
*Dawson, James H., Falls Church, Va.
*Decker, Henry, Charleroi, Pa.
*Dennis, General E. H., Greenrich, Va.
*Dietz, Ernest C., College Park
*Dodson, William A., Culpepper, Va.
*Ferguson, Walter M., Washington, D. C.
*Flannery, Michael J., Washington, D. C.
*Forsyth, Lewis V., Berwyn
*Foster, Paul P., Washington, D. C.
Ganoza, Luis F., Tripillo, Peru
*Graves, Harvey C., Branchville
Gray, Marshall C., Ironsides
*Grimm, Paul H., Trego
Harrison, John L., Berlin
Harrison, Orlando, Berlin
*Hearold, John W., Miskinon, Va.
*Hevessy, Michael, South Norwalk, Conn.
*Hicks, Harry W., Kernstown, Va.
*Higgins, Newett G., Beltsville
*Hohman, Charles W., West, W. Va.
*Holmer, John, New York City
*Howell, Clarence, Chase City, Va.
*James, Howard V., Williamsburg, Va.
*Johnson, Leo C., Conduit Road
Jones, Arthur, Davidsonville
*King, David, Monrovia
*Kirby, Wilton G., Havre de Grace
*Lincoln, Leonard B., Takoma Park
Link, John M., Mt. Rainier
*Lint, David L., Washington, D. C.
*Llewellyn, P. Carrington, Esmont, Va.
*Lynn, Winfield, S., Washington, D. C.
*McAvoy, James R., New York City
*McGlone, Joseph F., Baltimore
*Mantheiy, Felix, College Park
Mattingly, James M., Leonardtown
*Maxwell, Haddy O., Kingstown, N. Y.
*Moler, Robert C., Mt. Rainier
*Molesworth, Roger W., Ijamsville
Morsell, John B., Bowens
*Norris, Elmer A., Berwyn
*Parlett, William A., College Park
Parran, Julius P., Lusby's
*Persinger, Harry B., Berwyn
*Pierce, John R., Washington, D. C.
*Poppen, Alvin W., Hyattsville
*Richards, Felix W., Washington, D. C.
*Richardson, Harry F., Washington, D. C.
*Ritter, Floyd H., Middletown
*Rodeheaver, Delbert C., Oakland
*Ross, Charles E., Oriole
*Rowe, George, Brentwood
*Russell, George O., Norfolk, Va.
Schrider, Paul, Takoma Park
*Shoemaker, Charles, Bethesda
*Simpich, Ira M., Landover
*Smith, Arthur, Washington, D. C.
*Staley, Charles C., Berwyn
*Stanley, Edward A., Bluefield, W. Va.
Stewart, Harry A., Rustburg, Va.
*Strathman, George F., Baltimore
*Sullivan, Clifford, Reisterstown
*Sullivan, Jeremiah, Branchville
*Sunday, William P., Washington, D. C.

*Tait, George S., Fairfax, Va.
*Thompson, Franklin H., Baltimore
*Tobin, William J., Washington, D. C.
*Trower, Hugh C., Norfolk, Va.
*Vaughn, William J., Lotta, N. C.
Vick, Clyde M., Baltimore
*Vigus, Edwin E., Baltimore
*Weistling, Howard H., Washington, D C.
*White, George A., Winchester, Ind.
*Whiteford, Mitchell, Whiteford
*Wiley, Benjamin H., Bittinger
Williams, Edward L., Selbyville
*Wilson, Asael S., Phoenix
*Woodward, Amos R., Watersville
*Wootten, John F., Berwyn

UNCLASSIFIED

Betts, Thomas R., Oberlin, Ohio
Bullock, Earl M., Riverdale
Clarke, Glen, Clarksville
Crain, Robert, Jr., Washington, D. C.
Higgins, Warren F., Hyattsville
Marty, Ivan M., Roland Park
Miller, Asa C., Washington, D. C.
Pollock, George F., Boyds
Ross, Marion A., Princess Anne
Smith, Edward J., Riverdale
Voegeli, Oscar E., Washington, D. C.

COLLEGE OF ARTS AND SCIENCES

SENIOR CLASS

Beachley, Ralph H., Middletown
*Bosley, Lester W., Washington, D. C.
Brewer, Brooke, College Park
Butler, Sidnia, New York City
Clark, Morrison M., Silver Springs
Darkis, Frederick R., Frederick
Elder, James W., Cumberland
Gilbert, Herbert D., Frederick
Graham, Walter S., Hyattsville
Hodgins, Robert J., Union City, Pa.
Keene, Victor H., Snow Hill
Kemp, Allen D., Frederick
Levin, Hyman E., Baltimore
Northam, Alfred J., Pocomoke
Paganucci, Romeo J., Waterville, Me.
Reinmuth, Otto P. H., Frederick
Remsberg, Gerald G., Braddock Heights
Scheuch, John D., Washington, D. C.
Schramm, George N., Cumberland
Scott, Joseph G., Princess Anne
Semler, Harry E., Hagerstown
Shank, Hughes A., Smithsburg
Young, Robert N., Washington, D. C.

JUNIOR CLASS

Ady, Elizabeth G., Sharon
Barnes, Benjamin L., Princess Anne
Besley, Arthur K., Baltimore
Blandford, Mildred, College Park
Block, Albert, Laurel
Brewer, Charles M., College Park
Burroughs, James E., La Plata
Chappell, Kenneth B., Kensington
Chase, Ralph H., Washington, D. C.
Clagett, John F., Marlboro
Daskais, Morris H., Baltimore
Downin, Lauran P., Hagerstown
Filbert, Edwin B., Baltimore
Fitzgerald, Thomas H., Princess Anne
Gifford, George E., Rising Sun
Gordon, Isadore, Riverdale
Graves, Ernest A., Washington, D. C.
Jones, William M., Chestertown
Lescure, William J., Harrisburg, Pa.
Marker, Russell E., Hagerstown
Mathias, Leonard G., Hagerstown
Mayers, Ruth E., Washington, D. C.
Moore, John F., Washington, D. C.
Nisbet, Andrew N., Baltimore
Polk, Lawrence W., Pocomoke City
Porter, Robert G., Hyattsville
Posey, M. Winfield, La Plata
Reppert, Ruth I., Washington, D. C.
Rex, Elmer G., Reinersville, Ohio
Simmons, Lawrence D., Takoma Park
Spence, Charlotte C., College Park
Sturgis, William C., Snow Hill.
Terwilliger, William C., Highland, N. Y.
Thompson, Ruth A., Washington, D. C.
Watkins, Robert M., Mt. Airy
White, Charles E., College Park

SOPHOMORE CLASS

Baker, Norman W., Reisterstown
Beers, Wilson C., Waterford, Conn.
Besley, Florence E., Baltimore
*Bragg, John H., Washington, D. C.
Brewer, Virginia W., College Park
*Cannon, Amos P., Salisbury
Clay, Catherine L., College Park
Carty, Clarence, Frederick

Clemson, Earle P., Baltimore
Darcy, George D., College Park
Davis, Henry V., Berlin
Demio, Alexander W., New Kensington, Pa.
Ensor, Zita, Sparks
Froelich, Juanita, Crisfield
Fiske, Clarence W., Kensington
Gambrill, Charles M., Pittsburgh, Pa.
Gemmill, William F., Baltimore
Harned, Frank M., Merchantsville, N. J.
Heidelbach, Henry R., Catonsville
Herlihy, Timothy M., Newberryport, Mass.
Hitchcock, Albert E., Washington, D. C.
Holmes, Thomas J., Takoma Park
House, Kingsley A., College Park
Knotts, James T., Jr., Sudlersville
Lesher, Dean S., Williamsport
Lininger, Harry C., Westernport
Luckey, George J., Trenton, N. J.
McRae, John C., Washington, D. C.
Merva, Andrew J., Nanticoke, Pa.
Nemphos, Peter C., Baltimore
Newcomer, W. Park, Denton
Newland, Paul F., Bristol, Tenn.
Newman, Richard D., Smithsburg
Reisinger, John C., Washington, D. C.
Rissler, Raymond L., Washington, D. C.
Robertson, Harold S., Summerill, Mass.
Shank, James O. C., Smithsburg
Shepherd, M. Wayne, Berwyn
Silverman, I., Washington, D. C.
Spence, Virginia I., College Park
Swank, James L., Elk Lick, Pa.
Tayntor, Lewis O., Salisbury
Tobias, Herbert R., Hancock
Townsend, Miles D., Reisterstown
Walsh, Humphrey M., Washington, D. C.
Wardwell, Aubrey S., Washington, D. C.
Walter, Henry M., Washington, D. C.
Warrenfeltz, Mary S., Hagerstown
Weimer, Winifred R., Washington, D. C.
Weseley, Louis J., Brooklyn, N. Y.

FRESHMAN CLASS

Atkinson, Rollins J., Frederick
Beaven, George F., Hillsboro
Benton, Gordon, Stevensville
Berger, William A., Bloomfield, N. J.
Binkley, Walter, State Line, Pa.
Blandy, Thelma, College Park
Bogley, Preston P., Washington, D. C.
Brown, Robert A., High Point, N. C.
Burger, Joseph C., Washington, D. C.
Cannon, James, Hyattsville
Chasser, Rudolph R., Homestead, Pa.
Clapp, Houghton C., Washington, D. C.
Coe, Grace, Berlin
Cook, Robert, Lanham
Coombs, Walter C., Washington, D. C.
Cranford, Harold L., Riverdale
Daugherty, Walter E., Washington, D. C.
Dorsey, Anna H. E., Ellicott City
Dougall, James L., Garrett Park
Duke, Henry A., Durham, N. C.
Emack, Ellen P., Beltsville
Fewell, Russell W., Baltimore
Flanagan, Virginia M., McKeesport, Pa.
Ford, Edwin L., Washington, D. C.
Froelich, Wilfred L., Crisfield
*Furbershaw, Joseph A., Washington, D. C.
Gambale, Francis J., Waterbury, Conn.
Gaylor, Edward C., Branchville
Greager, Oswald H., Hyattsville
Gurley, Revere B., Garrett Park
Hak, Samuel H., New York City
*Harmon, Mary, Washington, D. C.
Hawkshaw, John W., Hyattsville
Hill, Minnie M., Washington, D. C.
Holmes, Clarence S., Riverdale
Horn, Millard J., Washington, D. C.
Hubbard, James H., Cordova
Hubbell, Vance R., La Junta, Col.
Jones, Joseph W., Washington, D. C.
Juska, Edward F., Elberon, N. J.
Keane, John P., Sandy Hook, Conn.
Klein, Truman S., Union Bridge
Lang, Idamay, Washington, D. C.
Levy, Herman F., Baltimore
Littman, Isaac, College Park
Logue, William I., College Park
*Loving, George W., Washington, D. C.
Lowden, Henry M., Gaithersburg
McDonald, C. Kingsley, Barton
Mace, John, Jr., Cambridge
Macko, Joseph A., Homestead, Pa.
Marden, Tilghman B., Annapolis
Marshall, Housden L., Washington, D. C.
Massicott, Marie M., Muscogee, Ga.
Merrill, William H., Pocomoke
Minkoff, Alvin H., Brooklyn, N. Y.
Monk, Henry L., Salisbury, N. C.
Moulton, Earle W., West Haven, Conn.
Mullen, Beulah O., College Park
Nash, Mabel M., Berwyn
Netzger, Solomon, Brooklyn, N. Y.
*Newcome, Troy A., Hyattsville
Nichols, Marshall H., Clarksville
Norris, Helen G., Baltimore
Pabst, William F., Milwaukee, Wis.
Parks, Leston C., Bristol, Tenn.
Peake, Clarence W., Aberdeen
Peebles, Irving, Lonaconing
Phillips, Gareld S., Hagerstown
Powers, Selwyn L., Hyattsville

Ramos, Jose, San Lorenzo, Porto Rico
Roberts, Henry J. B., Clara
Robertson, Dorothy, Laurel
Rolon, Jesus M., Aibonito, Porto Rico
Ryon, Allison F., Waldorf
Schmidt, George H., Baltimore
Schotta, Victor T., Oella
*Scott, Edward A., Bristol, Tenn.
Scott, Fred S., Galax, Va.
Scott, William M., Princess Anne
Singer, Jacob J., Baltimore
Smith, George H., Taft, Va.
Stambaugh, Bruce T., Woodsboro
Stewart, Charles K., Hillsboro
Tan, Felix H., Brintengong, Java
Taylor, Ritchie P., Washington, D. C.
Weseley, Harry B., Brooklyn, N. Y.
Wheaton, Isaac E., Greenwich, N. J.
White, Russell B., Kittanning, Pa.
Wickard, Walter L., McKeesport, Pa.
Wissinger, Zona A., Johnstown, Pa.
Wollak, Theodore M., Baltimore

UNCLASSIFIED

Crooks, William S., Frederick
Goodyear, Louis B., College Park
House, Hugh O., College Park
Lankford, J. Miles, Pocomoke
Latham, James D., Baltimore
Lawson, Lee W., Williamson, W. Va.
MacDougall, Alan F., Merchantville, N. J.
Porton, Robert H., Hyattsville
Pugh, Edward L., Chevy Chase
Purvis, Matthew R., Baltimore
Schott, Loren F., Washington, D. C.
Walls, Henry R., Churchville
Wilmeth, Clyde F., Takoma Park, D. C.

SCHOOL OF COMMERCE (Extension Courses)

SOPHOMORE CLASS (Day)

Bodin, A. J., Baltimore
Cummons, Owen D., Baltimore
Edmeades, William T., Jr., Baltimore
Hughes, Earle R., Baltimore
Perna, Philander F., Baltimore

FRESHMAN CLASS (Day)

Arrara's, J. Enrique, Baltimore
Bell, Wylie K., Baltimore
Boyd, Radcliffe MacN., Baltimore
Bradfield, Norris, Baltimore
Braun, Millard L., Baltimore
Bressler, David R., Baltimore
Bridges, Thomas F., Baltimore
Buckey, Charles G., Frederick, Md.
Cosimi, Euripides, Baltimore
Creighton, James C., Baltimore
Davis, Ben S., Baltimore
Dorsch, Earl P., Baltimore
DiPaula, Joseph S., Baltimore
Finnan, C. Marshall, Baltimore
Goodwin, Leon F., Baltimore
Goldberg, Samuel R., Baltimore
Gray, Arthur W., Baltimore
Hill, J. William, Jr., Baltimore
Hinsch, Henry, Baltimore
Ives, Mrs. Elizabeth M., Baltimore
Kennedy, John, Baltimore
Kelley, William B., Baltimore
King, John C., Baltimore
King, Howell A., Baltimore
Liles, Robert S., Baltimore
Lynch, James, Baltimore
Meirs, William G., Baltimore
Mendels, Joel, Baltimore
Morales, Carlos J., Baltimore
Odend'hal, Sebastien, Jr., Baltimore
Padlibsky, S. Hess, Charleston, W. Va.
Prissman, Harold H., Baltimore
Pullen, Frank H., Baltimore
Robinson, J. O., Baltimore
Robinson, Moody, A., Baltimore
Schooler, Benjamin H., Baltimore
Sheats, Alonzo J., Baltimore
Silverstein, Jack, Baltimore
Speert, Benjamin, Baltimore
Straughn, Frederick N., Baltimore
Strouse, Howard S., Baltimore
Stunz, Robert C., Lansdowne, Md.
Sullivan, Dennis B., Baltimore
Sullivan, Joseph L., Baltimore
Tawney, Arthur W., Baltimore
Weisman, Benjamin, Baltimore
White, Porter T., Baltimore
Williams, Edward R., Prince Frederick, Md.
Yenchus, Ella M., Baltimore

SENIOR CLASS (Evening)

Bolstler, Eugene, Baltimore
Clabaugh, John E., Baltimore
Katz, Sylvan, Baltimore
Metcalfe, H. C., Baltimore
Otto, J. Rollin, Baltimore
Scherer, George M., Baltimore
Schwarz, H. A., Baltimore
Terlitzky, Bessie, Baltimore
Tippett, Frank F., Baltimore
Wetzel, William M., Baltimore
Wooldridge, A. V., Baltimore

JUNIOR CLASS (Evening)

Euchtman, Joseph, Baltimore
Fagan, Jacob B., Baltimore
Garmer, J. Harry, Baltimore
Knabe, Lloyd C., Baltimore
Koch, Catharine M., Baltimore
Miller, Elizabeth, Baltimore
Needalman, Hyman, Baltimore

SOPHOMORE CLASS (Evening)

Abramson, Hyman, Baltimore
Beirfeld, Samuel J., Baltimore
Clemens, Maynard A., Baltimore
Hofferbert, Vernon T., Baltimore
Hudson, W. C., Baltimore
Levinson, William G., Baltimore
Rosenfeld, Nathan, Baltimore
Tucker, John H., Baltimore
Wannen, C. L., Baltimore

FRESHMAN CLASS (Evening)

Albrecht, Wilbur T., Baltimore
Appel, Louis C., Baltimore
Awalt, James A., Baltimore
Baddock, Herman V., Baltimore
Bishop, Mark Z., Baltimore
Bouis, Grace G., Baltimore
Boyer, Mitchell M., Baltimore
Carroll, James C., Baltimore
Carter, Calvin J., Baltimore
Chayt, Leon, Baltimore
Clark, J. Raymond, Baltimore
Dashiell, Charles W., Baltimore
Dauer, William F., Baltimore
Dawson, C. E., Fork, Md.
Edwards, S. M., Baltimore
Esterson, MacM., Baltimore
Feldman, Charles A., Baltimore
Frenz, Charles A., Baltimore
Friedman, Nathan, Baltimore
Fusek, J. G., Lutherville, Md.
Gary, Judson Emmet, Jr., Baltimore
Gilbert, J. B., Laurel, Md.
Gleichman, R. Wheeler, Baltimore
Goodman, Morris, Baltimore
Gore, Nellie B., Reisterstown, Md.
Gore, S. Maria, Reisterstown, Md.
Gosnell, William L., Baltimore
Griffin, James Albert, Baltimore
Habert, Marie W., Baltimore
Hallam, J. Henry, Baltimore
Idelson, Michael N., Baltimore
Jackson, Howard E., Baltimore
Kaufman, Edward L., Jr., Baltimore
Kirby, Harry W., Baltimore
Knier, Earl W., Baltimore
Kramer, William H., Baltimore
Krengel, Ethel A., Baltimore
Langrall, Lee, Baltimore
Lavine, Simon, Baltimore
Lindsay, G. Easby, Baltimore
Linn, Charles D., Baltimore
McKewen, John L., Baltimore
McCahan, R. S., Baltimore
Mallet, Victor J., Baltimore
Mansur, Douglas B., Baltimore
Markland, F. K., Baltimore
Mellor, Harry P., Baltimore
Milener, Jr., Eugene D., Baltimore
Miller, Harry, Baltimore
Monoker, Harry, Baltimore
Morris, John C., Baltimore
Murray, E. Churchill, Baltimore
Nasdor, Harry L., Baltimore
Nemphos, P. Charles, Baltimore
Neumann, Herbert E., Baltimore
Nusbaum, Jerome W., Baltimore
Palees, Wolf, Baltimore
Parr, Gerard J., Baltimore
Pickus, Morris, Baltimore
Rapperport, Albert A., Baltimore
Rodgers, Patrick A., Baltimore
Rose, Charles J., Baltimore
Rossman, E. A., Baltimore
Rowles, L. B., Baltimore
Sanford, Vernon E., Baltimore
Schmidt, Oswald, Baltimore
Shevitz, Max S., Baltimore
Sindall, John Wesley, Baltimore
Snyder, Benjamin, Baltimore
Smith, Nathan, Baltimore

St. Clair, William V., Baltimore
Stigile, Cecil M., Baltimore
Tharle, Herbert D., Baltimore
Timm, Harry J., Baltimore
Strauss, H. M., Baltimore
Vacth, James E., Baltimore
von Briesen, Roy, Baltimore
Williams, Nat., Baltimore
Wright, Millard F., Jr., Baltimore
Zieve, Lewis S., Baltimore

UNCLASSIFIED (Evening)

Alger, Harry B., Baltimore
Applestein, H. A., Baltimore
Arnold, Harry A., Baltimore
Atkinson, M. S., Jr., Baltimore
Bagwell, R., Baltimore
Baker, Louis B., Baltimore
Barget, Florence K., Baltimore
Behney, William Clair, Baltimore
Blum, Albert H., Baltimore
Bosch, Harry, Baltimore
Boyce, Fred G., Baltimore
Boyce, Heyward E., Baltimore
Briscoe (Miss), Baltimore
Broderick, Frank J., Baltimore
Buckingham, Lewis G., Baltimore
Bugg, Ray S., Baltimore
Burns, H. J., Baltimore
Byrnes, Bernard J., Baltimore
Cahn, Charles M., Baltimore
Carpenter, W. H., Baltimore
Cherkosky, Samuel
Cole, James M., Baltimore
Comegys, W. F., Baltimore
Crowther, Lester H., Baltimore
Dallas, Harry A., Baltimore
Davis, John F., Baltimore
Davis, Marion B., Elkridge, Md.
Dawson, Garland H., Baltimore
Dietrick, John F., Baltimore
Dilworth, Paul H., Baltimore
Dix, Sherwood, Baltimore
Englar, D. Fred, Baltimore
Elfont, Louis, Baltimore
Emmerich, H. J. S., Baltimore
Everhart, John F., Baltimore
Famous, Frank E., Baltimore
Franke, Louis, Baltimore
Foard, J. Stanley, Baltimore
Franz, Charles P., Baltimore
Friedman, Theodore, Baltimore
Gallagher, William V., Baltimore
Garrison, F., Baltimore
Gill, Lawrence T., Elkridge, Md.
Gordon, Maurice, Baltimore
Gould, Helen, Baltimore
Gregory, Arthur W., Baltimore
Griffith, R. S., Baltimore
Gross, George, Baltimore
Gross, E. W., Jr., Baltimore
Gurwitz, Herman, Baltimore
Gwynn, Hazel F., Baltimore
Habert, Marie W., Baltimore
Hafele, Chris. C., Baltimore
Hillegeist, W. M., Baltimore
Howard, J. L., Baltimore
Hulin, Joseph E., Baltimore
Hundley, J. M., Jr., Baltimore
Hutchinson, George R., Baltimore
Jendrek, Frank J., Baltimore
Jenkins, George G., Baltimore
Jones, Ira W., Baltimore
Jones, S. Edith, Baltimore
Kalb, Harry W., Baltimore
Katz, David, Baltimore
Kearney, James, Baltimore
Keller, Frank R., Baltimore
Kelley, J. W., Baltimore
Kemp, Grace V., Baltimore
Kindred, Robert Elmer, Baltimore
Kennedy, J. C., Baltimore
Keonan, John J., Baltimore
Keiper, W. McH., Baltimore
Knoerr, Paul E., Sudbrook, Md.
Koppelman, Charles H., Baltimore
Kurland, Fannie, Baltimore
Langgood, Charles J., Jr., Baltimore
Lankford, Clinton C., Baltimore
Lappe, Cornelius A., Baltimore
Lavenstein, Ruth, Baltimore
Lesinsky, Samuel, Baltimore
Levin, Raphael I., Baltimore
Loetell, Albert W., Baltimore
McAbee, Mollie, Baltimore
McCollister, J. G., Baltimore
McCreary, George W., Baltimore
McDaniel, Lillian K., Baltimore
McAfee, C. N. Baltimore
McLaughlin, William G., Baltimore
McVay, Lillian, Baltimore
Madigan, Margaret M., Baltimore
Meade, Arthur C., Baltimore
Mellor, George O., Baltimore
Meyer, Ehlandt A., Baltimore
Mooney, Lawrence R., Baltimore
Mooney, John H., Baltimore
Morgereth, Frank H., Baltimore
Morrison, Edna, Baltimore
Nicklas, Tulita, Baltimore
Oakley, Columbus K., Baltimore
Pessel, J. S., Baltimore
Phillips, Harry C., Baltimore
Pickert, George J., Baltimore

Pohlhand, Walter C., Baltimore
Press, Herman, Baltimore
Riley, D. A., Baltimore
Roberts, Marjorie, Baltimore
Robinson, C. M., Baltimore
Roeder, William A., Jr., Baltimore
Rose, Francis J., Baltimore
Russell, Nina M., Baltimore
Sacks, Samuel J., Baltimore
Sanner, Harry W., Baltimore
Schaefer,, Wilmer F., Baltimore
Schaffer, Charles D., Baltimore
Schmidt, Mildred M., Baltimore
Schnick, William D., Baltimore
Schutz, Robert C., Jr., Baltimore
Schwartz, Benjamin, Baltimore
Scott, T. Parkin, Relay, Md.
Seidman, Jene I., Baltimore
Shapiro, Frank B., Baltimore
Sheedy, J. E., Baltimore
Sherry, Mrs. Helen, Baltimore
Shevlin, Hugh T., Baltimore
Siehler, Rosa, Baltimore
Silbernagel, L. F., Baltimore
Sloan, James S., Baltimore
Smith, Alma E., Baltimore
Snyder, Benjamin B., Baltimore
Stauge, Miss A., Baltimore
Stein, Ira, Baltimore
Stepanek, Rose, Baltimore
Stern, Ernestine, Baltimore
Stitzenberger, William, Baltimore
Stromberg, Sydney, Baltimore
Sutton, John A., Washington, D. C.
Tarshish, Allen, Baltimore
Tarsis, Miss Bessie, Baltimore
Taylor, Charles Irvin, Baltimore
Taylor, Wilson E., Baltimore
Tittsworth, W. B., Baltimore
Tooell, G. Walter, Baltimore
Trott, Ida M., Baltimore
Tucker, Gertrude E., Baltimore
Vinup, Frederick R., Baltimore
Wanner, Marie E., Baltimore
Weil, S. L., Baltimore
Wells, Mary E., Baltimore
Whaley, William B., Baltimore
Wheeler, Charles H., Baltimore
Wheeler, Pauline, Baltimore
White, Alvan H., Baltimore
Wicks, Katherine, Baltimore
Zeller, Charles F., Baltimore

SCHOOL OF DENTISTRY

SENIOR CLASS

Aisenberg, Myron S., New Britain, Conn.
Atno, Winfield, J., Newark, N. J.
Blank, Samuel H., Camden, N. J.
Bock, Charles A., Baltimore, Md.
Bugg, Emmett, P., Madison, Ga.
Burke, William F., Amesbury, Mass.
Clark, John F., Utica, N. Y.
Emmart, Luther L., Baltimore, Md.
Gaver, Grayson W., Myersville, Md.
Gibson, Moses, Baltimore, Md.
Goldstein, Saul, Newark, N. J.
Greenberg, Abe D., New Haven, Conn.
Grossman, Louis, Newark, N. J.
Kiell, Cecil I., Newark N. J.
Leades, Saul D., New Britan, Conn.
Lugar, Troy C., New Castle, Va.
Reichel, William, Annapolis, Md.
Rothfeder, Sidney N., New Britain, Conn.
Saliva, Alferdo S., Mayaguez, Porto Rico
Scheer, Nathan, Baltimore, Md.
Shehan, Daniel E., Baltimore,Md.
Silverman, Jacob, Newark, N. J.
Smith, Oswald P., Asheville, N. C.
Soifer, Max E., Hartford, Conn.
Spinner, Alex. J., Newark, N. J.
Terhune, William C., Paterson, N. J.
Thomson, Henry Burgess, Culpeper, Va.
Wolfe, Maynard DeWitt, Bloomfield, N. J.
Wolf, Morris, Washington, D. C.

JUNIOR CLASS

Adair, William V., Grafton, W. Va.
Amenta, Lawrence J., North East, Pa.
Ashby, John L. Mt. Airy, N. C.
Betts, Allan R., Morris Plains, N. J.
Brenner, Morris, Pittsburgh, Pa.
Brickner, Lottie, Bronx, N. Y.
Brown, Louis L., Ellicott City, Md.
Campbell, Ralph D., Taunton, Mass.
Childers, Ellsworth W., Salem, W. Va.
Cook, James R., Frostburg, Md.
Coward, Charles C., Cheraw, S. C.
Crowley, William H., Troy, N. Y.
Cummings, Edwin S., Newark, N. J.
Davenport, Joseph M., Thomas, W. Va.
Davidson, Lewis C., Lewisburg, W. Va.
Gibbins, Edward B., Newark, N. J.
Givens, Robert I., Sinking Creek, Va.
Goldstein, Joseph, Washington, D. C.
Goomrigian, Leon H., Summit, N. J.
Hoff, Joseph H., Wellsville, Pa.
Hogan, Jesse D., Mt. Airy, N. C.
Jones, James A., Altoona, Pa.

Karn, George C., Jefferson, Md.
Kayne, Louis E., Baltimore, Md.
Kiser, William R., Keyser, W. Va.
McCarthy, Harry B., Swanton, Vt.
Medearis, William F., Winston-Salem, N. C.
Mortenson, Peter M., Perth Amboy, N. J.
Munoz, Cristino, Jr., Juana Diaz, Porto Rico
Nesbitt, Harry R., Baltimore, Md.
Nimocks, Henry S., Fayetteville, N. C.
Perry, Elmer A., Warwick, N. Y.
Prather, Ernest, Burnt House, W. Va.
Pressly, William A., Rock Hill, S. C.
Richards, Vernon W., Wardtown, Va.
Richmond, Selman L., Hinton, W. Va.
Rider, Charles A., Benwood, W. Va.
Schmalenbach, Herbert, Baltimore, Md.
Shaak, Walter D., Kearny, N. J.
Sheppe, Alfred H., Frenchton, W. Va.
Silberman, Harry A., Washington, D. C.
Schwartz, Max M., Jersey City, N. J.
Thaman, William C., Baltimore, Md.
Thorn, Allen H., Newark, N. J.
Walsh, Walter T., Moriah Center, N. Y.
Waserberg, Irving, New York, N. Y.
Whitehead, Alvin P., Morehead City, N. C.
Yates, Frank F., Grafton, W. Va.
Young, George W., Rutherford Heights, Pa.

SOPHOMORE CLASS

Adkins, Lester O., Parsonsburg, Md.
Bauder, John Frank, Newark, N. J.
Bauer, Edwin L., Elizabeth, N. J.
Bazinet, Wilfred J., Jr., Webster, Mass.
Begg, John F., Waterbury, Conn.
Boatman, Willis W., Orting, Wash.
Bradshaw, John P., Burkeville, Va.
Casey, John Andrew, Wilmington, Del.
Chimachoff, Nathan T., Newark, N. J.
Christian, William P., Pedro Miguel, C. Z.
Corcoran, Donald M., New London, Conn.
De Vita, Anthony L., Livingston, N. J.
Dillon, Francis W., Milford, Mass.
Fernandez, Julio M., Aguadilla, Porto Rico
Fitzgerald, George E., Churnbusco, N. Y.
Gibbins, Clifford H., Newark, N. J.
Grempler, Karl F., Baltimore, Md.
Hayes, Francis I., Waterbury, Conn.
Heywood, John J., Jr., North Adams, Mass.
Hogle, W. Mason, So. Glens Falls, N. Y.
Hurst, Orville Clayton, Wilsonbury, W. Va.
Kearfott, Joseph G., Shipman, Va.
Kelley, Harry, H., Plattsburg, N. Y.
McCutcheon, Robert Bell
Miller, Wilson L., Cape May, N. J.
Moran, Michael Edward, Manchester, N. H.
Nigaglioni, Julio Rafael, Porto Rico
Racicot, George J., Webster, Mass.
Rice, Ray E., Seven Stars, Pa.
Rutrough, Bruer W., Roanoke, Va.
Sherrard, Vernon F., Presque Isle, Maine
Shart, Joseph R., Lexington, W. Va.
Sickles, William V., Troy, N. Y.
Styers, Edward J., Baltimore, Md.
Swing, James P., Jr., Ridgely, Md.
Taylor, John Kenneth, Frostburg, Md.
Thatcker, Paul S., Franklin, W. Va.
Thomas, Carl Livingston, Danville, Va.
Tressler, Roland A., Baltimore, Md.
Trettin, Clarence, Baltimore, Md.
Vazquez, Jorge A., Ponce, Porto Rico
Wallace, Louis A., Springfield, Mass.
Whitehead, JohnW., Morehead City, N. C.
Wilson, Harry Davis, Baltimore, Md.
Wright, Joseph L., Baltimore, Md.

FRESHMAN CLASS

Abramson, Leonard, Bayonne, N. J.
Baschoar, Clyde E., Littlestown, Pa.
Baum, Theodore A., Baltimore, Md.
Beard, John H., York, Pa.
Benazzi, Bomeda B., Danville, Va.
Benick, Carroll R., Baltimore, Md.
Berlioz,, Guillermo, Comayagua, Honduras
Bishop, Charles B., Waynesboro, Pa.
Blaisdell, Virgil C., Sullivan, Me.
Bomberger, Paul S., Lancaster, Pa.
Bridger, Roy H., Lewiston, N. C.
Brigadier, Leonard R., Bayonne, N. J.
Brightfield, Lloyd O., Baltimore, Md.
Brown, Bruce D., Greenbank, W. Va.
Browning, Balthis A., Baltimore, Md.
Buchness, Joseph V., Baltimore, Md.
Burt, Joseph F., Williamstown, W. Va.
Cahill, Thomas J., Smithton, W. Va.
Campbell, Samuel L., Charleston, W. Va.
Capo, Enrique, Ponce, Porto Rico
Chase, Herman, Newark, N. J.
Chewning, Carroll W., Orange, Va.
Cohen, Meyer H., Carbondale, Pa.
Cooper, Arthur S., Austin, Pa.
Dixon, Charles M., Jr., Frederick, Md.
Doble, Howard R., Presque Isle, Me.
Dolan, Joseph K., Pawtucket, R. I.
Fisher, Jacob D., Hampton, Va.
Garrett, Charles R., Waynesboro, Pa.
Goldstein, Harry, Baltimore, Md.
Greenwald, Louis E., Passaic, N. J.
Hall, Howard V., Westfield, N. J.
Hart, William I., Jr., Johnson City, Tenn.
Heaps, Guy A., Lancaster, Pa.

Higby, Clifford C., Newark, N. J.
Hinrichs, Ernest H., Baltimore, Md.
Hitchcock, Lewin N., Taneytown, Md.
Hoover, Samuel H., Sparrow's Point, Md.
Ingram, William A., Cheraw, S. C.
Keister, Walter L., Upper Tract, W. Va.
Kerlejza, George J., New Britain, Conn.
LaRoe, John Edward, Plainfield, N. J.
LeFevre, Edward W., Newport News, Va.
Levine, Milton, Bayonne, N. J.
Lewis, Frank Lucas, Baltimore, Md.
Loehwing, George Henry, Paterson, N. J.
Lynch, Daniel F., Waterbury, Conn.
McCormick, Richard E., Springfield, Mass.
McCrystle, Frank Christian, Minersville, Pa.
McEvoy, George F., Waterbury, Conn.
Matney, William G., Looney, Va.
Mercader, Miguel A., Mayaguez, Porto Rico
Meyer, Oscar W., East Rutherford, N. J.
Moulton, Earle W., West Haven, Conn.
Ortel, Linwood, Baltimore City
Phelps, Frederick, W., Bridgeport, Conn.
Phillips, George J., Monk, Va.
Polk, Charles J., Hartford, Conn.
Powell, Albert C., Adamston W. Va.
Rieman, Barnett, Bayonne, N. J.
Sakac, John J., Wallington, N. J.
Schaff, Fred L., Greencastle, Pa.
Scholtes, Charles P., Minersville, Pa.
Shea, Edward W., Holyoke, Mass.
Siegel, Arthur, Long Island, N. Y.
Smith, Henry H., Adamston, W. Va.
Stewart, William, Jr., Wilmington, Del.
Stoner, Edgar T., Hagerstown, Md.
Teague, Henry N., Martinsville, Va.
Thomas, Cecil A., Newport News, Va.
Towill, Robert B., Wake, Va.
Ulanet, Louis, Newark, N. J.
Van Auken, Ross D., New Brunswick, N. J.
Viera, Providencia, Rio Piedras, Porto Rico
Voorhees, John A, Jr., East Orange, N. J.
Webb, Charles S., Bowling Green, Va.
Wierciak, Paul A., Ludlow, Mass.
Wildemann, Elmer M., Keyser, W. Va.
Wilhelm, Paul, Whiteford, Md.
Williams, Edgar R., Inez, N. C.
Willis, George A., Bel Air, Md.

COLLEGE OF EDUCATION

SENIOR CLASS

Burroughs, J. Armstead, Clinton
Canter, Francis D., Aquasco
Ensor, Hulda, Sparks
McDonald, William F., Barton
Morgan, Paul T., Baltimore
Nelson, Gordon V., Newport News, Va.
Peterman, Walter W., Clear Spring
Smith, Mildred P., Washington, D. C.

JUNIOR CLASS

Anderson, Mary P., Washington, D. C.
Baldwin, Francis W., Huntington, Pa.
Cissel, Paul C., Highland
Crowther, G. Elizabeth, Sparks
Graham, James F., Barclay
Lighter, Richard C., Middletown
Jones, Miriam E., Chestertown
McBride, Austin A., Middletown
*Pullen, Jesse P., Martinsville, Va.
Smith, Nellie O., Washington, D. C.
Vaiden, Victoria, Baltimore
Watkins, Donald E., Mt. Airy

SOPHOMORE CLASS

Castella, Olive W., Riverdale
Colbert, Alice, Washington, D. C.
Dorsey Ethel A., Beltsville
Foster, James J., Parkton
Glenn, Wilbur J., Smithsburg
Groves, John, Wasington, D. C.
Knox, Lucy, Buena Vista, Fla.
Lemon, Frances D., Williamsport
Morris, Mildred, Salisbury
Mountain, Eunice, Davis, W. Va.
Remsberg, Harold A., Middletown
Soper, Elsie M., Beltsville
Stewart, J. Raymond, Street
Walrath, Edgar, Annapolis
Williams, Esther, Lanham

FRESHMAN CLASS

*Bennett, Benjamin H., Washington, D. C.
Buckey, Nellie S., Mt. Rainier
Byrd, J. W. Miles, Crisfield
Coblentz, Roscoe, Middletown
Columbus, Ruth, Washington, D. C.
Dolly, Virgil O., Flintstone
Duvall, Elizabeth S., Washington, D. C.
Earnest, Lillian O., Mt. Rainier.
Evans, Robert B., Bel Air
Gardner, George P., Middletown
Grosdidier, Edith H., Hyattsville
Guthridge, Eleanor C., Washington, D. C.

Hadaway, Ella, Rock Hall
Harbaugh, Mary, Washington, D. C.
Hicks, Martha E., Gambrills
Longridge, Joseph C., Barton
Magruder, John W., Gaithersburg
Nicol, Victorine G., Manassas, Va.
Orme, Elsie L., Barnesville
Rigdon, Wilson O., Street
Rutter, Grace, Denton
Shank, Elizabeth R., Smithsburg
Simpson, Vivian V., Washington, D. C.
Willis, Rebecca C., Hyattsville
Willis, Theodora, Hyattsville

UNCLASSIFIED

Branner, Cecil G., Dover, Del.
Kline, Ralph G., Frederick

INDUSTRIAL TEACHER TRAINING CLASS

Bryarly, M. M., Baltimore
Deussen, Henry, Baltimore
Dietz, Frank J., Baltimore
Edwards, Paul C., Baltimore
Hedrick, M., Baltimore
Hipsley, S. P., Baltimore
Oswald, Charles, Baltimore
Roberts, E., Baltimore
Russo, V., Baltimore
Schnider, K. A., Baltimore
Spann, J. Norman, Baltimore
Spartana, O. R., Baltimore
Stapleton, Edward G., Baltimore
Ullman, M. J. Baltimore
Wallace, O. A., Baltimore
Wilson, A., Baltimore

FOREMANSHIP TRAINING CLASS

Alger, Harry B., Baltimore
Arnold, Hary A., Baltimore
Broderick, Frank F., Baltimore
Dietrich, John F., Baltimore
Gregory, Arthur W., Baltimore
Griffith., R. S., Baltimore
Kalb, Harry, Baltimore
Kelley, J. W., Baltimore
Lanford, Clinton C., Baltimore
Merritt, L. D., Baltimore
Miller, Hartman, B., Baltimore
McLaughlin, William G., Baltimore
Roeder, William A., Jr., Baltimore
Schaefer, Wilmer F., Baltimore
Scoot, Thomas P., Jr., Baltimore
Stromberg, Sydney, Baltimore
Ulrich, Jerome, Baltimore
Wheeler, Charles H., Baltimore

COLLEGE OF ENGINEERING

SENIOR CLASS

Best, Alfred S., Harwood
Broach, Keator T., College Park
Busck, Paul G., Wasington, D. C.
Butts, John A., Loysburg, Pa.
Darnall, Charles E., Hyattsville
Darner, Edwin F., Hagerstown
Ewald, Francis G., Mt. Savage
Hines, Augustus W., Washington, D. C.
Moore, Charles E., Baltimore
Neighbors, Herbert E., Lewistown
Norwood, Frederick J., Washington, D. C.
Pusey, Merwyn L., Cape Charles, Va.
Russell, Edgar F., Washington, D. C.
Sasscer, Clarence D., Croom

JUNIOR CLASS

Albrittain, Mason C., La Plata
Bailey, Caleb T., Bladensburg
Baldwin, M. J., Washington, D. C.
Belt, William B., Hyattsville
Bennett, Frank A., Hagerstown
Boteler, Howard M., Laurel
Braungard, Paul J., Hagerstown
Chichester, Frederick, Aquasco
Compher, Carlton M., Doubs
Cook, Charles S., Frederick
Donaldson, DeWitt C., Laurel
Elliott, Joseph W., Hebron
Harlow, James H., Havre de Grace
Himmelheber, Joseph B., Baltimore
Knapp, Peter T., Overlea
McMurtrey, Clifton C., Washington, D. C.
Melvin, Willis G., Havre de Grace
Montgomery, Wilbur B., Washington, D. C.
Neuman, Allen B., Washington, D. C.
Owings, Elliott P., North Beach
Powell, Robert W., Princess Anne
Reed, Raymond B., College Park
Richard, William J., Goldsboro
Schaefer, John P., Riverdale
Simmons, Lansing G., Takoma Park
Stranahan, Robert J., Union City, Pa.

Toadvine, Harry L., White Haven
Van Sant, Bayard R., Greensboro
Walden, Frederick P., Raspeburg
Wallis, Albert G., Frederick
Wick, George A., Washington, D. C.
Wisner, J, Ward, Jr., Baltimore
Zepp, Willard E., Clarksville

SOPHOMORE CLASS

Bartlett, Wirt D., Centerville
Brothers, Maurice F., Washington, D. C.
Bunten, William H., Philadelphia, Pa.
Chestnut, Frank T., Hyattsville
Cohee, Lee A., Easton
Conway, James P., Cumberland
Foard, James H., Aberdeen
Glass, Gerald, L., Hyattsville
Hall, Charles R., Ridgewood, N. J.
Hill, William B., Hyattsville
Howard, M. Hamilton, Brookeville
Johnson, George W., Chesapeake City
Kraft, John F., Ellicott City
Latham, Ector B., Washington, D. C.
Miller, Harold, Frederick
Orr, Stanley C., Hyattsville
Rizer, Richard T., Mt. Savage
Robertson, Russel A., Washington, N. J.
Schumann, Andrew E., Princess Anne
Seney, Joshua M., Chestertown
Shofnos, William, Washington, D. C.
Sipes, Ralph M., Towson
*Sleeth, James R., Washington, D. C.
Steele, Eugene P., Hagerstown
Terry, Henry M., College Park
Wenger, Charles W., Washington, D. C.
White, John I., Washington, D. C.
Young, Walter H., Washington, D. C.

FRESHMAN CLASS

Aldridge, Davis D., Frederick
Aldridge, Howard R., Mt. Savage
Allen, James C., Washington, D. C.
*Allison, Carl O., Washington, D. C.
*Barr, Tandy L., Washington, D. C.
Beach, Robert W., Washington, D. C.
Bennett, Leslie C., Upper Marlboro
Blades, Samuel L., Sudlersville
Bowers, Walter L., Hagerstown
Bowie, John, Jr., Annapolis Juct.
Bowser, Merl L., Kittaning, Pa.,
Brooks, William C., Sparrows Point
Burnside, Douglas D., Washington, D. C.
Cardona, Oscar de. Aquadillo, Porto Rico
Castella, Charles C., Riverdale
*Clagett, John H., Roslyn
Collins, Stanton J., Sparrows Point
*Davis, Earnest G., Hyattsville
Day, Austin W., Washington, D. C.
Dent, George H., Churchton
Derickson, John C., Bel Air
Evans, George W. Pocomoke
Fisher, A. Boyd, Point of Rocks
Fisk, Willis H., Kensington
Friese, Nervin W., Hagerstown
Funk, Wilson S., Denton
Glover, Charles P., Mt. Airy
Graham, Ralph M., Washington, D. C.
*Grimm, William H., Washington, D. C.
Harper, Donald N., Royal Oak
Hook, Addison E., Baltimore
*Hoppe, John H., Riverdale
Huyett, Earl D., Hagerstown
Jones, William B., Wilkes Barre, Pa.
King, Barnwell R., Branchville
Kline, William M., Washington, D. C.
Knox, Howard L., Miami, Fla.
Knox, Lloyd T., Buena Vista, Fla.
Lewis, Gomer, Washingon, D. C.
Lewis, William H., Elkton
Lilly, Thomas A. Ellicott City
Litchfield Charles W, Washington, D. C.
McClung, Marvin R., Norrisville
McCune, William T., Elkton
McFadden, Charles P., Elkton
*MacKintosh, Lewis M., Mt. Rainer
Magalis, Benjamin W., Brunswick
Meeds, Nelson T., Silver Springs
Melchior, Lewis F., Washington, D. C.
Melvin, Dudley A., Havre de Grace
Mills, J. E. Wayne, Washington Grove
Morris, Paul, St. Michaels
Nihiser, Edwin E., Hagerstown
*Noe, Ira J., Washington, D. C.
Norment, Cassius L., Bastrop, Texas
Orr, Robert G., Lonaconing
*Patton, Gordon S., Jackson, Miss.
Prangley, Arthur G., Washington, D. C.
Price, Walter H., Washington, D. C.
Price, William D., Washington, D. C.
Richardson, James O., Washington, D. C.
Rogers, Frederick H., Washington, D. C.
Sanders, Warrington P., Washington, D. C.
Staley, Daniel R., Knoxville
*Taylor, Donald S., Philadelphia, Pa.
Troxell, William F., Gaithersburg
Usilton, Noel E., Worton
Vandegrift, Edgar D., Cumberland
*Vandoren, Theodore J., Hyattsville
Warren, John S., Pocomoke
Watkins, Benjamin III, Davidsonville
Wilson, N. John, Frederick
Woodruff, Charles M., Sparrows Point

UNCLASSIFIED

Baum, Edwin C., Washington, D. C.
Coronel, Ulpiano, New York
DeCaindrey, William A., Baltimore
Lewis, Paul D., Newport News, Va.
Ridout, James A., Annapolis
Sampson, Hugh, Branchville
Stoll, Charles C., Brooklyn
Stites, Howard I., Washington, D. C.
Thurtell, Charles S., Washington, D. C.

GRADUATE SCHOOL

Alexander, Howard B., Oil City, Pa.
Conrad, Carl M., Riverdale
Donaldson, E. Calvin, Laurel
Eaton, Orson N., Beltsville
Ezekiel, Walter, Berwyn
Flenner, A. L., Glen Mills, Pa.
Harman, Susan E., Omega, Oklahoma
Juchhoff, Edna Z., Washington, D. C.
Lichtenwalner, D. C., College Park
Mather, William, Amherst Mass.
Matzen, B. Andrew, Berwyn
New, Edward F., Hyattsville
Schrader, Albert L., So. Kaukanna, Wis.
Shillinger, J. E., Washington, D. C.
Starkey, Edgar B., Sudlersville
Vierheller, Albert F., Parkersburg, W. Va.
Whitehouse, William E., Amherst, N. H.
Wilhelm, Charles P., Baltimore
Winant, H. B., Washington, D. C.
Young, Malcolm R., Beesleys Point, N. J.

COLLEGE OF HOME ECONOMICS

JUNIOR CLASS

Gregg, Edith W., Washington, D. C.
Killiam, Audrey, Delmar
McCall, Elizabeth G., College Park

SOPHOMORE CLASS

Geschickter, Josephine, Washington, D. C.
Morris, Sarah E., Hyattsville
Murphy, Anna M., Staunton, Va.

FRESHMAN CLASS

*De Vol, Helen M., College Park
Kerig, Florence D., Baltimore
*Langenfeldt, Marie E., Hyattsville
*Pfefferkorn, Hilda, Baltimore
Simmonds, Helen F., Riverdale
Simmonds, Lillis P., Riverdale
*Stewart, Anne S., Rustburg, Va.
Tepper, Elizabeth, Washington, D. C.
Wolfe, Mary T., Forest Glenn

THE LAW SCHOOL

SENIOR CLASS

Aaron, Samuel J., Baltimore
Ahrling, George C., Baltimore
Arnold, Frank, Baltimore
Baugh, Ernest V., Jr., Baltimore
Beall, Paul U., Baltimore
Bennett, Alton Y., Frederick, Md.
Benson, Franklin M., Baltimore
Berman, Paul, Baltimore
Bernard, Richard C., Baltimore
Blankner, Andrew L., Baltimore
Bollinger, James W., Reisterstown, Md.
Bosard, Stanley R., Thurmont, Md.
Bovey, William H., Hagerstown, Md.
Bradley, Hugh F., Jr., Jarrettsville, Md.
Brennan, Joseph T., Baltimore
Brown, Meyer, Baltimore
Bruce, David, Ruxton, Md.
Burgee, Amon, Jr., Frederick, Md.
Burtscher, Charles N., Baltimore
Butler, Thomas B., Towson, Md.
Cohan, Allan E. M., Baltimore
Cohen, Lewis W., Baltimore
Cohen, Maurice L., Baltimore
Councill, Eugene C., Baltimore
Cummings, George R., Baltimore
DiDomenico, Joseph F., Baltimore
Dooley, John M., Cardiff, Md.
Fell, John Corry, Annapolis, Md.
Flentje, George F., Jr., Baltimore
Freeny, William E., Salisbury, Md.
Fricke, Henry W. L., Baltimore
Friedman, David, Baltimore

*Denotes students detailed to the University by the Veterans' Bureau.

Gay, James E., Jr., Greensboro, N. C.
Geiselman, Austin H., Jr., Baltimore
Goertz, Harry E., Baltimore
Goodman, Alexander, Baltimore
Guercio, Samuel V., Baltimore
Guthrie, Joseph A., Baltimore
Hall, Reginald I., Baltimore
Hargest, Edward E., Jr., Baltimore
Hartle, Calvert K., Hagerstown, Md.
Hecker, Samuel, Baltimore
Hewitt, Linwood T., Jr., Baltimore
Hisky, John G., Catonsville, Md.
Hooper, James J., Cambridge, Md.
Jacobs, Frank H., Jr., Bel Air Md.
Johnson, Edmond H., Snow Hill, Md.
Joseph, Saul Lipman, Baltimore
Kahn, Karl R., Baltimore
Kindred, Robert E., Sioux Falls, S. D.
Klipper, Charles W., Baltimore
Krebs, John W., Baltimore
Kruger, Harry, Baltimore
Kuenne, Herbert F., Baltimore
Lebowitz, Harry, Brooklyn, N. Y.
Lemmert, John Vernon, Baltimore
Leonhardt, Carroll, Baltimore
Levin, Albert A., Baltimore
Levinson, Saul R., Baltimore
Levy, Nathan B., Baltimore
Lindenberg, Adelaide H., Baltimore
Lowe, Denton S., Wittman, Md.
Lowe, William L., Baltimore
Lynch, Charles A., Raspeburg, Md.
Maas, Frederick L., Rossville, Md.
Mainen, Robert, Baltimore
Marbury, Fendall, Baltimore
Marsh, Paul Everhart, Baltimore
Marshall, Roland S., Baltimore
Matthews, Charles N., Baltimore
Merriken, William L., Baltimore
Miegel, Charles H., Baltimore
Miles, Joshua W., Marion Md.
Miller, George B., Baltimore
Millar, James H., Baltimore
Minder, John H., Baltimore
Molz, Joseph T., Baltimore
Naiman, Julius, Baltimore
Nake, George R., Baltimore
Newcomer, George S., Baltimore
Nowakowski, John J., Baltimore
Paca, John P., Baltimore
Palmisano, Augustine, Jr., Baltimore
Parr, Joseph T., Baltimore
Patti, Joseph J., Baltimore
Pausch, Richard, Baltimore
Powell, Thomas R., Baltimore
Price, William H., Snow Hill, Md.
Pyle, James H., Baltimore
Reutter, Eberhard E., Baltimore
Roche, James M., Baltimore
Rollins, Edward D., Baltimore, Md.
Rome, Paul H., Baltimore
Rossiter, Goldsborough G., Baltimore
Sanderson, Gustav, F., Baltimore
Savard, Ernest E., Bristol, Conn.
Schad, Harry J., Baltimore
Schmelz, Fred, Jr., Baltimore
Schneider, Leo A., Baltimore
Schonfield, Eugene, Baltimore
Schulze, Paul K., Baltimore
Seidman, Jesse Israel, Baltimore
Sellars, John, Baltimore
Sherbow, Joseph, Baltimore
Siems, Valentine B., Baltimore
Sinn, Walter E., Frederick, Md.
Skrentny, Joseph, Baltimore
Sline, Percy, Baltimore
Small, Leon, Baltimore
Snyder, Morris I., Baltimore
Socolow, Harry, Baltimore
Stanley, John Snowden, Laurel, Md.
Stern, Abraham, Baltimore
Sutton, Richard S., Baltimore
Talbott, Wm. S., Baltimore
Taylor, Walter L., Jr., Catonsville
Thompson, Charles H., Relay, Md.
Thomsen, Roszel C., Baltimore
Trageser, Charles A., Baltimore
Truitt, Vaughan R., Showell, Md.
Twigg, Lester A., Twiggtown, Md.
Urner, Frances Hammond, Frederick
Vogeler, John G., Baltimore
Victor, Julius A., Jr., Baltimore
Walker, Uthman, Baltimore
Weaver, Edwin C., Baltimore
Weinberg, LaFayette, Baltimore
Weiskittel, Francis A., Baltimore
Williams, Charles C., Baltimore
Williams, Richard W., Halethorpe. Md.
Wilson, Lewis M., Cumberland, Md.
Winebrenner, David C., 3rd., Frederick, Md.
Wolf, Arnold J., New York, N. Y.
Wolfson, Benjamin L., Baltimore

INTERMEDIATE CLASS

Albert, Milton A., Baltimore
Allen, Howell, W., Jr., Baltimore
Austin, Eugene, Castor, La.
Azrael, J. L., Baltimore
Bach, Joseph A., Ellicott City, Md.
Backman, John T., Baltimore
Barrett, Franklin P., Baltimore
Barrett, William L. K., Baltimore
Barron, Irving, Baltimore
Barron, Robert, Baltimore
Batty, Howard A., Baltimore
Baum, Albert S., Jr., Baltimore
Bellows, Donald P., Glyndon, Md.
Berenholtz, Sol. C. Baltimore

Berman, Benjamin L., Baltimore
Berman, S. Frances, Baltimore
Blackburn, Earle W., Baltimore
Blackistone, Richard P., Palmers, Md.
Blaustein, J. Selman, Baltimore
Blum, Albert H., Baltimore
Bowling, Joseph T., Hughesville, Md.
Bregel, Howard C., Baltimore
Caplan, David H., Baltimore
Caplan, Meyer, Baltimore
Caples, Walter R., Baltimore
Ciotti, Hector J., Baltimore
Cockey, Jr., James S., Stevensville, Md.
Cohen, Herman, Baltimore
Cohen, Jacob, Baltimore
Cohen, Joseph, Baltimore
Cole, Bessie O., Baltimore
Cole, Thomas W., Baltimore
Cotton, Myron S., Baltimore
Cover, James P., Easton, Md.
Crowther, George R., Smithsburg, Md.
Crowther, Lester, H., Baltimore
Czajkowski, Walter M., Baltimore
Darley, John W., Baltimore
Dimarco, Anne E., Baltimore
Due, Paul F., Baltimore
Farmer, James F., Baltimore
Feikin, Bernard, Baltimore
Fine, Harry, Baltimore
Foard, Frances M., Baltimore
France, Robert, Baltimore
Freed, Otto Raymond, Baltimore
Fyle, George H., Perryman, Md.
Gaskins, Damon S., Baltimore
Gillum, Wilbur A., Baltimore
Gisriel, Edwin L., Baltimore
Glick, Henry, Baltimore
Goldstein, Raphael S., Baltimore
Gontrum, Thomas McC., Baltimore
Gorsuch, Walter C., Oxford, Md.
Greenberg, Mordacai D., Baltimore
Griesacker, Joseph B., Baltimore
Gross, Christian W., Jr., Baltimore
Hahn, Theo. J., Baltimore
Hammerman, Israel H., Baltimore
Harrington, Thomas M., Baltimore
Hedeman, John R. T., Baltimore
Hochman, Joel J., Baltimore
Hofferbert, George, Baltimore
Horine, Dawson, Myersville, Md.
Horney, William R., Centreville, Md.
Horsey, Joshua R., Crisfield, Md.
Hunter, Lois M. B., Baltimore
Hyman, Morris D., Baltimore
Isaacson, Julius, Baltimore
Jett, Robert S., Baltimore
Jewell, Clay, Baltimore
Johnson, Russell H., Baltimore
Kairys Harry, Baltimore
Kelley, James P., Towson, Md.
Kelley, Stanley, Eldridge, Ala.
Kerpelman, Morris E., Baltimore
Kidd, James K., Baltimore
Kirchner, George W., Baltimore
Kornmann, Henry E., Baltimore
Krymski, Joseph M., Baltimore
Kurland, Fannie, Baltimore
Latane, Lewis M., Baltimore
Lazarus, Henry, Baltimore
Leavitt, Maurice M., Baltimore
Lesinsky, Samuel, Baltimore
Lickle, William F., Towson, Md.
Loughran, Jerome A., Ellicott City, Md.
Lutzky, Ida C., Baltimore
McCahan, Elmer B., Jr., Baltimore
McFaul, George, Baltimore
McInnis, Eugene, Baltimore
McKenney, Henry H., Baltimore
McLaughlin, Charles R., Baltimore
Maurer, Julius G., Relay Md.
Mazor, Meyer, Baltimore
Miller, Stephen J., Baltimore
Mooney, Lawrence R., Baltimore
Moore, George L., Baltimore
Mopsikov, Robert E., Portsmouth, Va.
Morgan, Tilghman, V., Baltimore
Mullan, W. G. R., Baltimore
Needle, Sidney, Baltimore
Neel, John M., Baltimore
Nickerson, Palmer R., Baltimore
Obrecht, Holliday H., Baltimore
O'Rourke, Andrew G., Roslyn, Md.
O'Toole, Bernard F., Baltimore
Palees, Mitchell, Baltimore
Parke, G. Arch, Baltimore
Pausch, George Baltimore
Perry, John W., Salisbury, Md.
Phillips, Seymour, Baltimore
Pierson, Leon H. A., Baltimore
Piper, William B., Baltimore
Porter, W. Edgar, Baltimore
Pressman, Maurice J., Baltimore
Presstman, Marie W., Baltimore
Pugh, Walter J., Baltimore
Pumpian, Herman, Baltimore
Rabuck, LeRoy T., Coraopolis, Pa.
Riddle, John F., Baltimore
Rody, Benjamin F., Baltimore
Roil, John R., Baltimore
Rose, Joseph M., Baltimore
Rosenberg, Sarah R., Baltimore
Scharf, Frederick, Baltimore
Schlegel, Edwin M., Reading, Pa.
Schonfield, Simon, Baltimore
Seltzer, Eugene P., Baltimore
Shapiro, Solomon, Baltimore
Shea, James D., Baltimore
Sherry, Helen (Mrs), Baltimore

Siff, H. E., Baltimore, Md.
Skinner, William H., Baltimore
Sloan, David W., Jr., Cumberland
Smith, Milton R., Glen Arm, Md.
Sokol, Max, Baltimore
Spedden, Alexander W., Jr., Baltimore
Stein, Charles F. H., Baltimore
Strauss, Raymond F., Baltimore
Stritehoff, Nelson H., Jr., Baltimore
Tome, Richard E., Baltimore
Truitt, Jeremiah F., Salisbury, Md.
Walker, Alfred F., Baltimore
Weintraub, Ben., Baltimore
Wilson, Frankie D., Lansdowne, Md.
Zimmerman, Benjamin, Baltimore

JUNIOR CLASS

Abell, Joseph W., Baltimore
Adams, Richard B., Baltimore
Ades, Bernard, Baltimore
Adler, Irwin H., Baltimore
Alexander, John Davis, Deal Island, Md.
Alexander, John G., Atlanta, Ga.
Arthur, Frank S., Jr., Baltimore
Baroway, Israel, Baltimore
Bartholomay, William P., Jr., Baltimore
Baugher, Irving B., Catonsville, Md.
Bearman, Sidney, Baltimore
Benson, Charles M., Baltimore
Benson, Francis M., Baltimore
Berlin, Herman, Baltimore
Biggs, Richard D., Baltimore
Biser, Leon W., Ijamsville, Md.
Blickenstoff, Lloyd S., Boonsboro, Md.
Borden, Aaron, Baltimore
Bousman, Floyd W., Baltimore
Boyer, Grace F., Halethorpe, Md.
Bramble, Forrest F., Baltimore
Bready, Henrietta Y., Baltimore
Brenner, David M., Baltimore
Browne, Alfred J., Baltimore
Brown, Ridgely R., Pikesville, Md.
Brownstein, Abraham, Baltimore
Caplan, Frank L., Baltimore
Carney, Robert E., Baltimore
Carroll, Paul E., Baltimore
Chen, St. Lake, Baltimore
Coburn, Benjamin H., Jr., Rock Hall, Md.
Clayton, John M., Cambridge, Md.
Cockey, Albert D., Baltimore
Cockey, Bennett F. B., Cockeysville, Md.
Codd, William A., Baltimore
Cohen, Leon, Baltimore
Coleburn, George R., Accomac, Va.
Connor, Campbell, Baltimore
Coolahan, Charles L., Baltimore
Coughlan, Robert E., Jr., Baltimore
Crockett, Charles C., Baltimore
Daisey, Carey J., Chincoteague, Va.
Dallam, Richard, Jr., Bel Air, Md.
Dankmeyer, Theodore R., Baltimore
Day, Carl L., Baltimore
Deady, Frank H., Baltimore
Debel, Neils H., Baltimore
deKowzan, Paul A., Baltimore
DeLashmutt, Emilie F., Baltimore
Dellone, Catherine R., Baltimore
DeMarco, Pasquale C., Baltimore
Donald, James, Hoguian, Wash.
Dorsey, Phillip H., Annapolis
Doyle, James J., Baltimore, Md.
Edelson, Milton Benjamin, Baltimore
Ehudin, Marcy M., Baltimore
Epstein, Samuel C., Baltimore
Famous, Franklin E., Street, Md.
Farber, George, Baltimore
Feinberg, Isidore B., Baltimore
Feldman, Isadore, Baltimore
Feldman, Sydney, Baltimore
Fenwick, James S., Baltimore
Figinski, Marion, Baltimore
Fine, Melvin, Baltimore
Fine, Phylburt E., Baltimore
Fineman, Isidor S., Baltimore
Finney, Esther Miriam, Wilkes-Barre, Pa.
Fitzpatrick, John J., Baltimore
Flack, Benjamin W., Jessup, Md.
Forrest, Otto, N., Baltimore
Foster, Reuben, Baltimore
Fox Herman, Baltimore
Frankel, Albert H., Baltimore
Fried, Louis C., Baltimore
Glick, Maurice, Baltimore
Goldberg, Charles F., Baltimore
Goldbloom, Milton, Baltimore
Goldston, Herbert N., Baltimore
Gould, Theodore, Jr., Baltimore
Greenberg, Alexander, Baltimore
Greene, Melvin J., Baltimore
Griffin, Felix A., Baltimore
Gundry, Richard, Catonsville, Md.
Gutberlet, Joseph C., Baltimore
Hammerman, Herman, Baltimore
Hampson, George M., Baltimore
Hanna Frank C., Cambridge, Md.
Harrington, Thomas B., Baltimore
Henneberger, J. E. Mt. Washington, Md.
Hoene, Mary Martin, Chicago, Ill.
Hoff, Albert J., Baltimore
Hoffman, George L., Baltimore
Honeywell, James O., Baltimore
Hopkins, Hastings B., Baltimore
Hopkins, Ira Crook, Ball's, Maryland

Hudson, H. E., Gumboro, Del.
Huss, Albert B., Baltimore
Iddings, Frederick T., Catonsville, Md.
Isaacson, Simon L., Baltimore
Jarboe, John M., Pearron, Md.
Johnson, Nathan, Baltimore
Jones, Elmer J., Baltimore
Kaiser, Leona J., Arnold, Md.
Kelley, Estel C., Westernport, Md.
Kennady, Bascom K., Baltimore
Kernan, Anthony E., Baltimore
Kilner, John I., Halethorpe, Md.
King, Daniel D., Ellerson, Va.
Kirby, Joseph S., Mt. Washington, Md.
Kirk, Grover C., Washington, D. C.
Kratz, John E., Baltimore
Lamberd, Luther S., Baltimore
Langsdale, Hewett, Easton, Md.
Lee, James J., Baltimore
Levin, Celia I., Baltimore
Lohmuller, George B., Baltimore
McCullough, James, Baltimore
McKinsey, Katherine, Baltimore
Maddox, William P., Baltimore
Macht, Louis E. Baltimore
Massey, William F., Sudlersville, Md.
Stevenson, Masson, Baltimore
Mechanic, William G., Baltimore
Meid, Albert, Jr., Baltimore
Meiser, Fred W., Baltimore
Mercer, Beverly H., Baltimore
Merrill, Irving W., Baltimore
Meyerhoff, Louis, Baltimore
Mihm, William A., Mt. Washington, Md.
Morris, Virginia C., Baltimore
Moshkevich, Gersh I., Baltimore
Moylan, Charles E., Ijamsville, Md.
Mulford, Harry S., Baltimore
Mullikin, James C., Easton, Md.
Nathan, Walter R., Baltimore
Neale, James S., Jr., Baltimore
Newell, Beach, Baltimore
Newman, Irving, Baltimore
Norton, George T., Baltimore
Novak, Charles J., Baltimore
Oletsky, Benjamin, Baltimore
Oppel, Louis J., Baltimore
Osborne, Herman B., Baltimore
Owinski, Joseph J., Baltimore
Oxley, John E., Poolesville, Md.
Paregol, Goldie, Baltimore
Parr, Frank T., Baltimore
Pence, Samuel A., Baltimore
Pennington, James N., Havre de Grace, Md.
Peregoff, Louis, Baltimore
Perlman, Arthur, Baltimore
Poole, John H., New Market, Md.
Post, Philip T., Baltimore
Price, William J., Centerville, Md.
Proper, Jerome, Baltimore
Rhodes, Walter E., Baltimore
Rhynhart, William W., Baltimore
Robins, Stanley G., Crisfield, Md.
Robinson, Irving E., Baltimore
Roesch, Emil A., Baltimore
Rosner, Jeanette, Baltimore
Roth, Edward P., Baltimore
Rowe, Roscoe C., Annapolis, Md.
Rubenstein, Abraham J., Baltimore
Russell, Frank J., Baltimore
Samuelson, Herman, Baltimore
Saxon, Joseph, Baltimore
Scaggs, George W., Washington, D. C.
Scaggs, Howard I., Baltimore
Schapiro, Ruth, Baltimore
Schiaffino, Frank P., Baltimore
Schlossberg, Abe., Baltimore
Schmitt, Martin F., Baltimore
Schraml, William J., Baltimore
Schulbe, George P., Catonsville, Md.
Sear, Abram, Hampton, Va.
Seliterman, Ben B., Baltimore
Semans, William R., Baltimore
Seymour, Charles C., Cumberland
Shea, Jeremiah D., Colchester, Conn.
Shockett, Harry M., Baltimore
Shockley, Elisha V., St. Michaels, Md.
Siegmund, Carl R., Baltimore
Simpson, Albert L., Portsmouth, Va.
Smith, Albert Van Deaver, Baltimore
Snyder, Karolyn P., Glyndon, Md.
Stevens, Edward W., Sudlersville, Md.
Stevens, James W., Baltimore
Stocksdale, Howard B., Baltimore
Sultan, Walter E., Baltimore
Swartz, Jerome, Baltimore
Tarshish, Allen, Baltimore
Taylor, Charles R., Baltimore
Tippett, William T., Baltimore
Truitt, Hughey B., Baltimore
Umbarger, Henry L., Bel Air, Md.
Vanger, Henry R., Baltimore
Vinci, Salvatore P., Baltimore
Walker, Owen, Baltimore
Watson, John G., Centerville, Md.
Webster, E. H., Bel Air, Md.
Wellmore, Grace L., Baltimore
Williams, Donald H., Halethorpe, Md.
Williams, Matilda D., Baltimore
Williams, Max, Baltimore
Woelfel, George B., Annapolis, Md.
Zetzer, Rose S., Baltimore

SCHOOL OF MEDICINE

POST-GRADUATES AND SPECIAL STUDENTS

Barnes, Harry A., Princess Anne, Md.
Bowers, Ralph C., Grantsville, Md.
Craige, Branch, El Paso, Texas
deCaesar, Dominick J., Brooklyn, N. Y.
Foxwell, Raymond K., Washington, D. C.
Hawkins, Vallie, Fawn Grove, Pa.
King, W. P.
Krieger, Emanuel, Baltimore
Meintzberger, Gilbert S., Baltimore
Norman, John S., Boardman, N. C.
Preston, D. G., Stephenson, Va.
Shepard, Gertrude, Atlanta, Ga.

SENIOR CLASS

Bailey, Harry, New Haven, Conn.
Buchness, Anthony V., Baltimore
Champe, Ira P., Jr., Charleston, W. Va.
Doshay, Louis J., Brooklyn, N. Y.
Fleischmann, Berthold, New York, N. Y.
Freidus, Elias, New York, N. Y.
Fritz, J. D., Brooklyn, N. Y.
Fulton, William J., Baltimore
Ginsberg, William, New York, N. Y.
Goldmann, Bernhard A., Pittsburg, Pa.
Gollick, William A., Jersey City, N. J.
Gordon, Elias, Philadelphia, Pa.
Gordon, Herbert, New York, N. Y.
Greenbaum, Leonard H., Baltimore
Groff, Morris, Brooklyn, N. Y.
Halley, George C., Twin Falls, Idaho
Harman, Robert D., Riverton, W. Va.
Hatfield, Daniel S., Charleston, W. Va.
Heitsch, Hubert M., Pontias, Mich.
Hollister, William, New Berne, N. C.
Horowitz, Herman J., New York, N. Y.
Huff, William, Roanoke, Va.
Ingram, David N., Baltimore
Keefe, George G., Waterbury, Conn.
Kerdasha, Weehawken, N. J.
Krager, John J., Baltimore
Kunkowski, Andrew, Baltimore
Lang, Milton Charles, Baltimore
Lawson, Lawrence W., Logan, W. Va.
Linke, Julian P., Plainfield, N. J.
McCoy, C. Glenn, Mannington, W. Va.
Mercier, Albin S., Lisbon, Md.
Middlemiss, W. R., Salt Lake City, Utah
Monninger, Arthur C., Scranton, Pa.
Morgan Ed. N., Batavia, N. Y.
Noll, Louis, Hartford, Conn.
O'Connor, John A., Baltimore
Payne, John E., Clarksburg, W. Va.
Peters, H. Raymond, Baltimore
Pittman, Henry L., Fayetteville, N. C.
Pullen, Guy F., Greenwich, Conn.
Rhodes, Bricey M., Tallahassee, Fla.
Rudisill, John D., Lincolnton, N. C.
Saporita, Archibald, R., Harrison, N. J.
Salzberg, Abraham, New York, N. Y.
Sekerak, Arthur J. F., Bridgeport, Conn.
Shannon, George E., Baltimore
Shapin, Sydney, Brooklyn, N. Y.
Shapiro, Louis M., New Haven,Conn.
Sternberg, Harry, Brooklyn, N. Y.
Stout, Philip D., Doeville, Tenn.
Stovin, Joseph S., New Haven, Conn.
Sweet, Samuel W., Utica, N. Y.
Trynin, Aaron H., Brooklyn, N. Y.
Warfield, John O., Jr., Philadelphia, Pa.
Wilson, Thomas N., Hebron, Md

JUNIOR CLASS

Beck, Nathaniel M, Baltimore
Berkson, Morris I., Pittsburg, Pa.
Bowers, Thaddeus R., Jr., Littleton, N. C.
Clapham, Roger E., Martinsburg, W. Va.
Cortese, Anthony Edward, Paterson, N. J.
Dart, Frederick B., Niantic, Conn.
Desane, Joseph, New York, N. Y.
Edmonds, John M., Harton, Mich.
Fleshman,, D. L., Pence Springs, W. Va.
Goldberg, Ben., Spring Valley, N. Y.
Gordon, Abraham S., Brooklyn, N. Y.
Giffin, Theodore C., Rowlesburg, W. Va.
Grose, Robert G., Harmony, N. C.
Groves, Robert B., Lowell, N. C.
Gutowski, Joseph M., Perth Amboy, N. J.
Hagerman, Paul, Cameron, W. Va.
Harp, J. Elmer, Hagerstown, Md.
Hirsch, Philip, New York, N. Y.
Hundley, John T. T., Jr., Lynchburg, Va.
Hunt, William B., Lexington, N. C.
Jennette, Will C., Fremont, N. C.
Keith, Marion Y., Wilmington, N. C.
Knipp, George A., Baltimore
Kraut, A. M., Jersey City, N. J.
Kyper, Frederick T., Clearfield, Pa.
Lally, Leo Aloysius, Scranton, Pa.
Long, Ira C., Morehead City, N. C.
Love, William Samuel, Jr., Baltimore
McCullough, C. S. L., Burgettetown, Pa.
McLean, Herbert E., Jersey City, N. J.

Moler, Raleigh M., Morgantown, W. Va.
Murray, Robert L., St. Pauls, N. C.
Myers, Karl J., Philippi, W. Va.
Newcomer, David R., Hagerstown, Md.
Newcomer, Ward E., McClellandtown, Pa.
Parson, Willard S., Wilkinsburg, Pa.
Peterman, James E., Cherry Tree, Pa.
Pondfield, Louis F., Baltimore
Pontery, Herbert, Weehawken, N. J.
Povalski, Alexander W., Jersey City, N. J.
Prather, F. G., Burnt House, W. Va.
Rothfuss, Paul A., Montoursville, Pa.
Ruche, Harry Charles, Philadelphia, Pa.
Schorr, Richard, New York, N. Y.
Shealey, Walter H., Leesville, S. C.
Sherman, Louis, Brooklyn, N. Y.
Smith, Charles F., Uniontown, Pa.
Snaith, Theresa O., Weston, W. Va.
Saurborne, Sylvia M. B., Bridgeport, W. Va.
Sowers, Roy Gerodd, Linwood, N. C.
Steincrohn, Peter J., Hartford, Conn.
Sussman, Abram A., Baltimore
Touhey, T. J., Wilmington, Del.
Walker, William Wallace, Winona, W. Va.
Wasserstrom, Sidney, Brooklyn, N. Y.
Weinert, Henry V., Jersey City, N. J.
Welton, William A., Petersburg, W. Va.
Werner, Walter I., Cleveland, O.
White, Francis W. M., Windsor, N. C.
White, James F., Morgantown, W. Va.

SOPHOMORE CLASS

Allen, Moore L., Salt Lake City, Utah
Anderson, Albert L., Annapolis, Md.
Antonius, Micholas, Orange, N. J.
Barnes, D. Keith, Kaysville, Utah
Bartlett, Charles W., Jr., Tampa, Fla.
Bershatsky, William, New York, N. Y.
Boyd, Kenneth B., Baltimore
Briglia, Nicholas N., Philadelphia, Pa.
Carter, Carl J., Catawba, W. Va.
Edelman, Edward I., Woodhaven, L. I.
Fisher, Harry R., New York, N. Y.
Flax, Ira I., Newark, N. J.
Frehling, Joseph M., Louisville, Ky.
Friedman, Bernard, New York, N. Y.
Friedman, Irving, Newark, N. J.
Gattens, Wilber E., Cumberland, Md.
Gottleib, Bernard N., Brooklyn, N. Y.
Granoff, Joseph F., Brooklyn, N. Y.
Greifinger, Marcus H., Newark, N. J.
Grossblatt, Philip, Newark, N. J.
Howell, Clewell, Vineland, N. C.
Jacobson, Philip, Baltimore
Knox, Joseph C,. Leland, N. C.
Koons, Earle W., Taneytown, Md.
Kratz, Fred W., Baltimore
Lebensperger, George F., Kutztown, Pa.
Levine, Samuel, Union, N. J.
McZane, William O., Frostburg, Md.
McClosky, William T., Washington, D. C.
Marsh, James T., Baltimore, Md.
Marton, Samuel, New York, N. Y.
Megahan, Burke, Williamsport, Pa.
Messinger, Benjamin, New York, N. Y.
Miller, Benjamin, Baltimore
Miller, Joseph G., Baltimore
Miller, Jacob M., Baltimore
Monroe, Clement R., Biscoe, N. C.
Moriarty, Louis, Manchester, Conn.
Morris, Philip, Brooklyn, N. Y.
Morrison, William H., Jr., Holmesburg, Pa.
Maseritz, Isidore, Baltimore
Maurillo, Dominick F., Brooklyn, N. Y.
Nash, Alexander E., Rutherford, N. J.
Nelson, James W., Baltimore
Neustaedter, Theodore M., New York, N. Y.
Nocera, Domingo, Mayaguez, Porto Rico
Norment, John E., Baltimore
Pachtman, Isadore, Braddock, Pa.
Perry, A. H., Louisburg, N. C.
Pitkowsky, Louis K., New York, N. Y.
Sarubin, Benjamin, Baltimore
Scagnetti, Albert, Congers, N. Y.
Scheindlinger, Morris I., Baltimore
Schultz, Louis A., New York, N. Y.
Scimeca, Antonio A., New York, N. Y.
Schlenger, Leo B., Paterson, N. J.
Seliger, Robert V., New York, N. Y.
Shapiro, Ralph N., Newark, N. J.
Tabershaw, Arnold L., New York, N. Y.
Theuerkauf, Frank J., Erie, Pa.
Urbanski, Adrian X., Perth Amboy, N. J.
Weiner, Hyman, L., Philadelphia, Pa.
Weinstock, Alex. A., Brooklyn, N. Y.
Whaley, Thomas Bravard, Berlin, Md.
Woodyard, Edwin S., Parkersburg, W. Va.
Zaslow, John Woodridge, N. Y.

FRESHMAN CLASS

Balcerzak, Stanley P., Wabash, Pa.
Bentz, Felix, New Britain, Conn.
Brender, Max, Bronx, N. Y.
Brown, Leo T., Washington, D. C.
Burke, E. N., Bonanza, Ky.
Cadle, William R., Frederick Jct., Md.
Cantor, Nathan, Hartford, Conn.
Carder, Joe R., Bristol, W. Va.
Cardinale, P. F., Newark, N. J.
Casey, Calvert E., Providence, R. I.
Cassidy, John J., Wilmington, Del.
Clahr, Abraham A., New York, N. Y.

Coe, John M., Washington, D. C.
Coffindaffer, R. S., West Virginia
Coonan, Thomas J., Jr., Westminster, Md.
Cope, Arthur A., Hamburg, Pa.
Davis, Norvel R., Frederick, Md.
Davidov, Benjamin, Baltimore
Davidson, Meyer, Baltimore
Demely, Louis A., Baltimore
DeVincentis, Henry, Orange, N. J.
Diffenderffer, Robert T., Pittsburg, Pa.
Donohoe, Edward C., Greensburg, Pa.
Donovan, Charles M., Terryville, Conn.
Draper, Leonidas McF., Warrenton, N. C.
Dreskin, Jacob L., E. Orange, N. J.
Dwyer, D. R., Waterbury, Conn.
Elgin, Lee W., Baltimore
Ellis, Francis A., Baltimore
Epstein, Harry H., New York, N. Y.
Everett, Franklin R., Philadelphia, Pa.
Fancher, H. Wilson, Jr., Winsted, Conn.
Farber, Raphael, Wellsboro, Pa.
Ferrara, James, New York, N. Y.
Fields, Abijah C.,Ensley, Ala.
Fine, Morris A., Baltimore
Finell, Reuben A., Baltimore
Fischman, Harold, Newark, N. J.
Fishof, Frank, New York, N. Y.
Fuchs, Abner, New York, N. Y.
Gale, Louis H., Erie, Pa.
Gastin, William B., Clarksburg, W. Va.
Geraghty, Francis J., Baltimore
Glickel, Henry, New York, N. Y.
Grandfield, R. Francis, Dorchester, Mass.
Greenwald, M., New York, N. Y.
Grimm, W. O., Jr., Buckhannon, W. Va.
Gross, Siegmund, New York, N. Y.
Hale, Elwin F., Simonson, Va.
Herbert, Alpha N., Oakhurst, N. J.
Hertz, Ben., New York, N. Y.
Hibbitts, John T., Baltimore
Hulla, Jaroslav, Baltimore
Jacobs, Morris A., Baltimore
Keating, John Patrick, Sandy Hook, Conn.
Kelly, Allen W., Taneytown, Md.
Kiesel, Henry, New York, N. Y.
Knotts, W. K., Sudlersville, Md.
Lalley, Paul F., Scranton, Pa.
Laus, Edward R., New York, N. Y.
Linde, S. A., Baltimore
London, Daniel, New York, N. Y.
Lopatin, Samuel, New Haven, Conn.
Lowe, Claude M., Fawn Grove, Pa.
Marcinick, E. S., Perth Amboy, N. J.
Merchant, Harry McC., Gainesville, Fla.
Metsky, Joseph, Newark, N. J.
Miller, Edgar R., New Freedom, Pa.
Minnefor, Charles A., Newark, N. J.
Mitchell, Charles A., Haynesville, Maine
Molina, Rafael Rodriguez, San Juan, P. R.
Morales, Jaime Vila, Rio Piedras, P. R.
Mullenusky, Joseph John, Shenandoah, Pa.
Nataro, Joseph, Newark, N. J.
Nimaroff, Meyer, Newark, N. J.
Nock, Randolph M., Stockton, Md.
Norment, Clinton C., Baltimore
Orton, Lyman R., Athol, Mass.
Oshrin, Henry, Jersey City, N. J.
Pearrell, Ernest H., Brunswick, Md.
Pierce, J. L., Marianna, Fla.
Pinsky, Myer M., Camden, N. J.
Polizzotti, Joseph L., Paterson, N. J.
Plassnig, Edwin, Baltimore
Poplack, Samuel L., New Haven, Conn.
Pulaski, Leo E., Shenandoah, Pa.
Pullen, Lawrence H., Baltimore
Radest, Louis, Brooklyn, N. Y.
Rathsprecher, Isadore, Newark, N. J.
Resh, George Daniel, Hampstead, Md.
Rezek, George J., Baltimore
Rosenberg, H. S., New York, N. Y.
Rosenstein, Jacob, New York, N. Y.
Rocco, Frank, Newark, N. J.
Sarnoff, Jack, New York, N. Y.
Schachter, Eugene J., North Braddock, Pa.
Schilling, A. B., New Jersey
Seiken, George, Liberty, N. Y.
Silverstein, Jacob M., Millburn, N. J.
Simon, Joseph R., East Pittsburg, Pa.
Smith, James B., Jr., Sharps, Va.
Skilling, Francis C., Baltimore
Sinton, William A., Newport News, Va.
Straka, Robert P., Homestead, Pa.
Sulman, William R., Reading, Pa.
Sweeney, J. J., Jr., Baltimore
Tomainoli, H. F., Hoboken, N. J.
Turner, Thomas B., Prince Frederick, Md.
Visconti, Joseph A., Hoboken, N. J.
Wallace, Ervin, B., Baltimore
Wassersweig, Martin Max, Reading, Pa.
Webb, Elmore M., Baltimore
Wiener, Joseph, New York, N. Y.
Weintraub, Harry, Baltimore
Weitzen, Samuel, New York, N. Y.
Zimmermann, Charles C., Cumberland, Md.

SCHOOL FOR NURSES

SENIOR CLASS

Bowie, Lucille L., Front Royal, Va.
Callaghan, Vera E., Dennison, O.
Deputy, Mary J., Chestertown, Md.
DuBois, Cecile M., Baltimore
Elgin, Grace L., Baltimore
Lord, Nettie B., Preston, Md.
Bowman, Morrisson F., Pittsburgh, Pa.
Paunair, Isabel J., Roanoke, Va.
Yeager, Eva L., Cumberland, Md.

INTERMEDIATE CLASS

Bishop, Maude O., Belhaven, N. C.
Boyd, Ruth, W., Street, Md.
Dunn, Helen, Baltimore
Edwards, Mary M., Edwardsville, Va.
Garvey, Kathryn A., Oil City, Pa.
Graham, Evelyn P. (Mrs.), Huntingdon,Pa.
Harkins, Hulda F., Street, Md.
Hazen, Dorothy L., Union City, Pa.
Hoke, Lillie, R., Emmittsburg, Md.
Horst, Kathryn E., Hagerstown, Md.
Kish, Vilma C., Trenton, N. J.
Lewis, Alice L., Eckhart, Md.
McCann, Wilhelmina N., Street, Md.
Maxwell, Irene A., Owings Mills, Md.
Nagel, Ida M., Federalsburg, Md.
Pratt, Anna E., Baltimore
Reade, Kathryn A., Painter, Va.
Schroeder, Marie E. C., Cambridge, Md.
Stailey, Margaret May, Liverpool, Pa.
Teeple, Helen S., Baltimore
Toms, Kittie R., Funkstown, Md.
West, Medora R., Martinsburg, W. Va.
White, Ruth A., Federalsburg, Md.

JUNIOR CLASS

Alexander, Edith L., Matthews, N. C.
Appleton, Pauline V., Punxsutawney, Pa.
Barnes, Merian, Nashville, N. C.
Boyd, Edith A., Baltimore
Callaway, Esther, A. Bridgeville Del
Compton, Pinkie L., Ronceverte, W. Va.
Copenhauer, Elizabeth E., Bel Air, Md.
Crownover, Carrie E., Huntingdon, Pa.
Davis, Marie M., Frostburg, Md.
Davis, Ruth E., Federalsburg, Md.
Duncombe, Caroline R., Union City, Pa.
Fisher, Mary E., Cumberland, Md.
Forrest, Lola R., Keymar, Md.
Herrington, Mazie M., Meadville, Pa.
Kinder, Minnie, Millersville, Md.
McCormack, M. J., North Adams, Mass.
Morgart, Julia H., Rainsburg, Pa.
Morse, Rachel, Cambridge, Md.
Penn, Ruth Virginia, Savannah, Ga.
Pope, Jane T., Fayetteville, N. C.
Putt, Bernice G., Saxton, Pa.
Rowe, Sarah E., Keedysville, Md.
Schaale, Bernice D. E., Baltimore
Schroeder, Ruth deB., Cambridge, Md.
Scott, Jane, Eckhart, Md.
Shaffer, Mary C., Westminster, Md.
Slez, Irene M., Millington, Md.
Suead, Lecy P., Tyro, Va.
Spencer, Lenora F., Westminster, Md.
Thomas, K. A., East Mauch Chunk, Pa.
Thompson, Irelene, Street, Md.
Tillinghast, Robina H., Fayetteville, N. C.
Wertz, Gladys A., Batesburg, S. C.
Wiley, Grace E., Wellsville, Pa.

SCHOOL OF PHARMACY

THIRD-YEAR CLASS

Shannon, Donald A., Baltimore, Md.

SECOND-YEAR CLASS

Andrews, Marvin J., Bristol, Tenn.
Batt, William H., Davis, W. Va.
Berger, George W., Baltimore
Blaine, Edward I., Jr., Pocomoke City, Md.
Burrows, Dudley A., Enfield, N. C.
Colucci, Nicholas J., Stamford, Conn.
Eselhorst, Albert R., Baltimore
Harmon, Carl M., Dundalk, Md.
Foose, Wilbur Clifford, Baltimore
Gordy, Howard L., Laurel, Del.
Gould, William M., Baltimore
Harbaugh, Arthur C., Hagerstown, Md.
Heck, Leroy Savin, Baltimore
Hermon, David, Baltimore
Hettleman, Milton L., Baltimore
Hopkins, Charles H., Baltimore
Krieger, Max A., Baltimore
Kroopnick, Jennie, Baltimore

Rivas, Leiva, Carlos E., San Luis, Cuba
Lyon, Andrew T., Havre de Grace, Md.
Marsh, Charles W., Baltimore
Morley, John V., Baltimore
Moxley, Reuben B., Baltimore
Newmeyer, A. S., Havre de Grace, Md.
O'Neill, Lawrence J., Baltimore
Payant, William W., Baltimore
Pelaez Bringas, Jose M., Santiago, Cuba
Piraino, Vincent J., Baltimore
Richardson, James J., Bel Air, Md.
Ruff, William A., Baltimore
Schapiro, Louis, Baltimore
Scher, Robert S., Baltimore
Smoak, Claude M., Bamburg, S. C.
Somerlatt, Virginia G., Cumberland, Md.
Willson, Emory R., Staunton, Va.

FIRST-YEAR CLASS

Baker, Israel, Baltimore, Md.
Barall, William, L., Towson, Md.
Basil, George C., Annapolis, Md.
Block, Solomon, G., Phoebus, Va.
Carliner, Louis A., Baltimore
Chertkof, Frieda, Baltimore
Coplin, Louis I., Baltimore
Cohen, Bernard J., Baltimore
Currier, Calona D., Havre de Grace, Md.
Donnet, John, Baltimore
Downey, Ralph C., Frostburg, Md.
Eldridge, Arthur C., Myersville, Md.
Ernst, Myrle P., Gettysburg, Pa.
Fields, Lorraine D., Pikesville, Md.
Finkelstein, Morris L., Baltimore
Flom, Charles, Baltimore
Frieman, Harry, Baltimore
Friedman, Alexander, Baltimore
Glass, Louis, Baltimore
Hantman, Harry H., Baltimore
Hinton, Murray S., Baltimore
Hecker, Nathan, Baltimore
Hurwitz, Louis, Baltimore
Kalb, Francis P., Baltimore
Katz, Benjamin R., Baltimore
Kelley, Guy C., Salisbury, Md.
Kirson, Abe R., Baltimore
Klosinski, Andrew L., Baltimore
Kramer, Morris, Baltimore
Leibowitz, Louis, Laurel, Del.
Levin, Harry, Baltimore
Marmor, Leon, Baltimore
Mattox, William H., Elberton, Ga.
Mears, Chase K., Nassawadox, Va.
Mears, Lee K., Salisbury, Md.
Millison, Harry, Baltimore
Moran, John E., Manchester, N. H.
Mullen, Charles L., Hagerstown, Md.
Musgrove, Walter G., Baltimore
Neel, Jerrold W., Baltimore
Norton (Mrs.) Edward, Laurel, Md.
Parlett, Edward L., Baltimore
Powers, John Ambrose, Baltimore
Ritt, Paul Edward, Baltimore
Roche, Louis C., Reisterstown, Md.
Rockman, Morris, Baltimore
Rosenthal, Emanuel, Baltimore
Rosenthal, Lewis R., Baltimore
Shea, Harold J., Baltimore
Sheehan, John L., Hillsboro, N. H.
Stacy, Theodore E., Jr., Baltimore
Stagmer, Owen R., Baltimore
Stuck, Raymond D., Baltimore
Van Slyke, Amos R., Baltimore
Voigt, Herman A., Baltimore
Wagner, Raphael H., Baltimore
Weinberg, Sol B., Staunton, Va.
Wright, Lawrence M., Baltimore

THE SUMMER SCHOOL

Abbott, Jessie B., Lonaconing
Abbott, Lilias C., Lonaconing
Aist, Elsie, Chettenham
Aist, Lorena, Chettenham
Albaugh, Mary L., New Market
Albrittain, Maria L., La Plata
Albrittain, Mary, La Plata
Albrittain, Pearl M., La Plata
Allen, Helen M., Cumberland
Allen, Kenneth, Berwyn
Andrews, Myrtle, Crapo
Andrews, Virginia L., Cumberland
Aud, Rose H., Valley Lee
Avery, Helena D., Washington, D. C.
Baden, Elizabeth L., Baden
Bailey, Mary E. Abell
Baity, Bessie M., Street
Baity Earl C., Street
Baldwin, Virgie M., Savage
Banfield, Frank W., Takoma Park, D. C.
Batson, Lawrence D., Brentwood
Beall, Katherine M., Anacostia
Beall, Susie C., Beltsville
Bennett, Alton Y., Frederick
Benson, Margaret R., Berwyn
Benton, Gordon, Stevensville
Birmingham, Angela M., Cumberland
Bishop, John, Washington
Blandford, Mildred C., College Park
Blandy, Thelma, College Park
Bonn, Florence R., Baltimore
Boone, Blanche L., Mt. Airy

Boone, Lydia I., Mt. Airy
Boston, Marguerite E., Cumberland
Bouis, George E., Mt. Washington
Bowling, Marybeth, Upper Marlboro
Bowser, Katherine R., Williamsport
Bragg, John H., Washington, D. C.
Brakeall, Janet E., Hancock
Brannan, Thomas C., Hyattsville
Branner, Cecil G., Dover, Del.
Branner, Ruth M., Dover, Del.
Brewer, Brooke, Washington, D. C.
Brewer, Margaret G., College Park
Brackbill, Mary E., Berwyn
Brown, Kathryn G., Hagerstown
Browne, Edward L., Chevy Chase
Bullock, Earl M., Riverdale
Burdette, Eunice E., La Plata
Burris, I. Grace, Centerville
Burroughs, James E., La Plata
Butler, Blanch H., Hoobs
Caltrider, Samuel P., Westminster
Cannon, Amos P., Salisbury
Carlisle, Sophia M., Barnesville
Carr, Isabel P., Laurel
Carroll, James G., Cumberland
Cawley, Eleanor D., Elkton
Cherry, Joseph C., College Park
Church, Carey F., College Park
Clagett, John H., Jr., Roslyn
Clark, Morrison M., Silver Springs
Clarke, Leona A., California
Clayton, Louella M., Mt. Rainier
Clinton. Sara F., Riverdale
Coleman, Adelaide A., Chester
Coleman, Cora M., Chester
Combs, Mary E., Ridge
Combs, Hilda E., Ridge
Comer, Alverta E., Frederick
Coney, William J., Roland Park
Coombs, Lillian M., Great Mills
Cooper, Charles H., College Park
Cooper, Mary E., Hancock
Corey, Flora I., Worton
Corkran, Delema I., Vienna
Corkran, Jesse A., Vienna
Cottrill, Frances M., Williamsport
Coyle, John W., Syracuse, N. Y.
Cross, Janie A., Westwood
Crothers, John L., Northeast
Curbow, Leone, Hyattsville
Darcy, George D., College Park
Davis, John J., Washington, D. C.
Davis, Frank R., Darlington
Davis, Nannie C., Barton
De Corse, Helen C., Mechanicsville
Dehner, Margaret P., Hanover
Derr, Lena J., Frederick
De Vol, Helen M., College Park
Dietz, Ernest C., College Park
Ditto, Lucy C., Sharpsburg
Donahoe, Mamie C., Massey
Dorsey, Ethel A., Burtonsville
Drury, Eleanor A., Barton
Dryden, Sallie P., Princess Anne
Dunnock, Ellen L., Woolford
Dunnock, Mildred I., Reid's Grove
Durst, Isabella C., Barton
Dusenbury, Lillian, Washington, D. C.
Duvall, Margaret J., Croom
Duvall, William M., Baltimore
Dyson, Alice E., Du Bois
Early, Angela D., Brandywine
Early, Josephine, Brandywine
Edelen, Mary G., Bryantown
Elliott, Clara M., Vienna
Ells, Ida J., Ellicott City
Engle, Ruth B., Frostburg
Eskridge, Margaret, Rhodesdale
Ewell, Ethel I., Compton
Ewell, Goldie, Compton
Fiery, Ruth C., Hagerstown
Finzel, Marie F., Frostburg
Fitzgerald, Margaret D., Washington, D. C.
Flanagan, Sherman E., Walkersville
Fleck, Walter, D., Denver, Col.
Fleenor, Audra L., Bristol, Va.
Fleming, Mabel, Seaford, Del.
Forsyth, Lewis V., Berwyn
Foster, Paul A., Ferrum, Va.
Foxwell, Erva R., Leonardtown
Freeman, Mary J., Du Bois
Frenzel, Elizabeth B., Barton
Giffen, Sallie, Cumberland
Glisan, Sarah M., Libertytown
Goldsborough, Mary B., Hollywood
Goldsborough, Philomena D., Hollywood
Goldsborough, Roberta A., Hollywood
Goldsmith, Caroline O., Waldorf
Goodman, Nannie D., Bristol
Gooding, Jeannette, Chestertown
Goodwin, Leonard M., College Park
Goodyear, Louis, Riverdale
Gordon, Neil E., College Park
Gossard, Mary Katherine, Williamsport
Grandfield, Robert F., Dorchester, Mass.
Graves, Birdie E., Harper's Ferry, W. Va.
Graves, Harvey C., Branchville
Graves, Sophia E., Loveville
Gray, Effie J., Riverside
Gray, Henry W., Richmond, Va.
Gray, Sadie L., Riverside
Green, Mary E., Boyds
Griffith, Mary I., Forestville
Grimes, Maye E., Woodbine
Grimm, Paul H., College Park
Grove, Ethel A., Charlton
Gutheridge, Eleanor C., Washington, D. C.
Hackett, Lavada E., Vienna

Haller, Grace P., Boonsboro
Hancock, Hugh, Huddleston, Va.
Hanson, Louise L., Port Tobacco
Harper, Floyd H., College Park
Harris, Catherine V., Chester
Harris, Samuel, Philadelphia, Pa
Harrison, Dora, Charlotte Hall
Harrison, May A., Brandywine
Hart, Cecelia M., Oakland
Hawthorne, N. B., Jr., Round Hill, Va.
Hayden, Beatrice, Pope's Creek
Hetterly, Ethel M., Mt. Rainier
Hill, Elsie M., Cumberland
Hoffmaster, T. V., Harper's Ferry, W. Va
Hinebaugh, Mary L., Cumberland
Hoffmaster, Viola P., Funkstown
Hohman, Charles W., West, W. Va.
Holland, Arthur H., Cartersville, Va.
Holland, Esther M., Ridgely
Holland, Eunice, Ridgely
Hood, Clinton, I., Berwyn
Hook, Elizabeth G., College Park
Horine, Randolph A., Brunswick
Hottel, John T., College Park
House, Mrs. H. C., College Park
House, Hugh O., College Park
House, Kingsley A., College Park
Howell, Clarence L., Chase City, Va.
Huemmer, Mary K., Seaford, Del.
Huffington, Jesse M., College Park
Husted, Leila, Berwyn
Hutchinson, Harry B., Hyattsville
Hyde, Ethel J., Barton
Inskeep, Lillie M., Barton
James, Howard V., Williamsburg, Va.
James, Jennie P., Mt. Rainier
Jones, Neva M., Trappe
Jewell, Edgar G., Poolesville
Kaetzel, Clarence W., Brunswick
Kauffman, Dorothy A., Westover
Kefauver, J. Orville, Mt. Savage
Kelley, Esther E., Hobbs
Kemp, Mary, Welcome
Kersey, Sarah E., Chester
Kershner, Susye G., Williamsport
King, Estella M., Millington
Kirby, Wilton G., Havre de Grace
Kooken, Nellie R., Westernport
Koontz, Roy L., Elkton, Va.
Kriner, Bertha H., Big Spring
Kriner, Julia E., Big Spring
Landers, Esther M., Hancock
LeCompte, Nancy D., Cambridge
Lefevre, Claud M., Littlestown, Pa.
Lescure, John M., Harrisburg, Pa.
Lescure, William J., Harrisburg, Pa.
Lincoln, Leonard B., Takoma Park
Lindsay, Ruth, Sandy Spring
Lint, David L., Washington, D. C.
Longenecker, John D., Keymar
Lowman, Clarence A., Funkstown
Ludlum, Samuel L., Chevy Chase
Lynch, Anna E., Ridgely
McAllister, Charlotte, Elkton
McCauley, Eva K., Chestertown
McCoy, Maud V., Beltsville
McCready, Mattie M., Vienna
McGann, Anna M., Frostburg
McLaughlin, Thomas E., Hyattsville
MacDonald, Alexander, Washington, D. C.
Major, Mary, Barton
Maloney, Elizabeth C., Elkton
Matthews, Laura K., Laurel
Mattingly, Anna E., Leonardtown
Mattingly, Elizabeth G., Leonardtown
Mattingly, Mary C., Abell
Mattingly, Violet S., Leonardtown
Matzen, Antoinette S., Berwyn
Matzen, B. Andrew, Berwyn
Meredith, Ruby O., Cambridge
Millar, Edna L., Ironside
Miller, Jessie L., Crandon, Va.
Miller, Mary E., Elkton
Mitchell, William E., Washington, D. C.
Moler, Robert C., Mt. Rainier
Moore, Gertrude C., Brookeville
Moreland, Mary B., Waldorf
Mudd, Christine E., Waldorf
Mudd, Lucille A., Waldorf
Muller, Charles L., Hagerstown
Mullinix, Virginia W., Chevy Chase
Murphy, Mary A., Vienna
Newcome, Troy A., Keyser, W. Va.
Newcomer, Gertrude, Hagerstown
Newman, Mrs. H. D., Beltsville
Nicht, Anna M., Frostburg
Nicol, Mary B., Rockville
Nichols, Marjorie A., Federalsburg
Ohler, Mary R., Taneytown
Ohler, Ruth V., Taneytown
Oliphant, Catherine M., Vienna
Oldenburg, Lillian J., Hyattsville
Palmer, Clara E., Hurlock
Palmer, Mildred E., Stevensville
Park, John, Frostburg
Parker, Helen J., Cumberland
Parlett, William A., Baltimore
Parran, Elizabeth, St. Leonard
Penman, Mary L., Mt. Rainier
Persinger, Harry B., Hogsett, W. Va.
Perry, Ruth L., Clear Spring
Pfefferkorn, Hilda, Baltimore
Phillips, Gladys E., Cambridge
Phillips, Matilda E., Vienna
Picken, Marion D., Lonaconing
Pierce, John R., College Park

Plummer, Martha C., Bristol
Poppen, Alvin W., Washington, D. C.
Porter, Florence M., Stevensville
Porter, Josephine, Salisbury
Porter, Vivien W., Washington, D. C.
Pry, Hazel G., Keedysville
Pullen, Jesse P., Martinsville, Va.
Quaintance, Howard W., Washington, D. C.
Quickel, Sara L., Washington, D. C.
Raeph, Emma W., Cambridge
Raedy, Michael L., Washington, D. C.
Reese, Margaretta S., Cordova
Reid, Lena L., Vienna
Reynolds, Clayton, Oxford, Pa.
Rice, Carrie M., Knoxville
Richards, Felix W., Washington, D. C.
Ridenour, Mary C., Hagerstown
Rieck, Elsa L., Preston
Robinette, Catherine G., Flintstone
Rolph, Norton J., Streator, Ill.
Rosenberg, Charles I., Hyattsville
Ross, Charles E., College Park
Rowe, George Brentwood
Runkles, Eader B., Mt. Airy
Russell, Esther A., Federalsburg
Russell, G. Oliver, Norfolk, Va.
Russell, Lillian C., Elkton
Russell, Mary M., Valley Lee
Russell, Mary T., Frederick
Ryman, William M., Mt. Jackson, Va.
Saldana, James, Berwyn
Sasscer, Ellen B., Croome
Schnebly, Katie L., Williamsport
Schweppe, Marie U., Anacostia
Schwien, Erna A., Townshend
Scott, Joseph G., Princess Anne
Seeger, Pauline R.. Frederick
Shaffer, Harry H., Upperco
Shepherd, Matson W., Berwn
Shives, Margaret A., Hancock
Short, Myrtle R., Vienna
Silverman, Israel D., Washington, D. C.
Simpich, Ira M., Landover
Simpson, Elizabeth H., Libertytown
Slacum, Elsie M., Federalsburg
Sloan, Margaret H., Lonaconing
Smith, Arietta H., Salisbury
Smith, Belle Jackson, Salisbury
Smith, Carrie B., Easton
Smith, Josie, Locust Grove, Va.
Smith, Mame, Ridgely
Snyder, Loyola, Hagerstown
Snyder, Pauline, Keedysville
Soper, Elsie M., Beltsville
Sparks, Mary H., Sudlersville
Spurrier, Catharine G., Brookeville
Staley, Charles C., College Park
Stamp, Adele H., Baltimore
Starkey, Vairs H., Ridgely
Stewart, Clotilda A., Easton
Stine, Leila M., Hagerstown
Storer, Ethel R., Cumberland
Straub, Marietta E., Cumberland
Strock, Carolyne, Hagerstown
Strong, Talmage A. R., Chestertown
Sturgis, William C., Snow Hill
Sullivan, Alice A., Branchville
Sullivan, Clifford E., College Park
Sullivan Jeremiah J., Branchville
Sussman, Abram A., Baltimore
Swann, Laura V., Anacostia
Tait, George S., Fairfax, Va.
Tarbell, William E., Baltimore
Taylor, Lola C., Beachville
Teeter, Benjamin F., Flintstone
Thomas, Gladys M., Boonsboro
Thomas, Margaret, Barton
Thomas, Mary E., Frederick
Thomas, Mary F., Hancock
Thompson, Nina M., Brownsville
Tighe, Catherine L. Riverdale
Tipton, Ada M., Mt. Airy
Triplett, Charles C., Washington, D. C.
Troup, Ellett H., Hagerstown
Turner, Madeline M., Gambrills
Twilley, Annette M., Hurlock
Vaughan, Clara B., Spring Valley, Va.
Vivanco, Carlos D., Washington, D. C.
Wagner, Julia A., Westernport
Walker, William P., Mt. Airy
Walters, Edith E., Federalsburg
Walters, Nellie E., Chestertown
Warrenfeltz, Ruth P., Funkstown
Weaver, Adah M., Keedysville
West, Katherine E., Centerville
White, Agnes H., Lonaconing
White, Beulah I., Lonaconing
White, Lulu B., Gaithersburg
White, Melva I., Washington, D. C.
Whiteford, Michael W., Whiteford
Whitt, Marie B., Riverdale
Wickham, Helen, Nottingham
Wiley, Benjamin H., Bittinger
Wiley, Lucy M., Bittinger
Wilson, Ida B., Pocomoke
Wilson, Josephine E., Charlotte Hall
Winders, Eva M., Hagerstown
Wise, Grace V., Issue
Wolfe, Elsie I., Sugarloaf, Pa.
Wood, Ellsworth, Washington, D. C.
Yeatts, Mildred O., Hagerstown
Younkins, Morse A., Weverton
Younkins, Oliver M., Weverton
Zimmerman, Ralph L., Frederick

SUMMARY OF STUDENT ENROLMENT AS OF MARCH 1, 1922

The College of Agriculture	216
The College of Arts and Sciences	214
The School of Commerce	315
The School of Dentistry	204
The College of Education	96
The College of Engineering	157
The Graduate School	20
The College of Home Economics	15
The School of Law	489
The School of Medicine	310
The School for Nurses	66
The School of Pharmacy	94
The Summer School	380
Extension Courses	75
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GENERAL INDEX

Any further information desired concerning the University of Maryland will be furnished upon application to DR. ALBERT F. WOODS, President, College Park, Md.